

Global Status Report on Alcohol



Substance Abuse Department
Social Change and Mental Health
World Health Organization

07/59
E-5-SDR

Mr. G.V. Raman
PGP-I, 9711018
E-5, Hostel Blocks
Indian Institute of Manage
ment
Bannerghatta Road
Bangalore
Phone No.

Community Health Cell

Library and Documentation Unit

367, "Srinivasa Nilaya"

Jakkasandra 1st Main,

1st Block, Koramangala,

BANGALORE-560 034.

Global Status Report on Alcohol

COMMUNITY HEALTH CELL

Library and Information Centre

No. 367, Srinivasa Nilaya, Jakkasandra,
I Main, I Block, Koramangala, Bangalore - 560 034.

THIS BOOK MUST BE RETURNED BY
THE DATE LAST STAMPED

--	--	--

Red quotes from
Dr Somnath Chatterjee
WHO
Jw
12/8/02

Abstract

The global burden of disease from alcohol exceeds that of tobacco and is on a par with the burden attributable to unsafe sex worldwide. To provide a global picture of the status of alcohol as a factor in world health, the report begins with an overview describing the types of alcohol available around the world and summarizing data and trends in recorded and unrecorded alcohol production and adult per capita consumption of alcohol. Prevalence of drinking and drinking patterns in the WHO regions and among key sub-populations such as men, women and young people are described. The overview provides statistics on the leading national producers, importers and exporters of alcohol, and describes the changing organization of alcohol production and trends toward globalized alcohol commodities heavily supported by marketing. A discussion of alcohol's possible protective effects is followed by statistics on chronic and acute consequences of alcohol use, including alcohol dependence, chronic liver disease and cirrhosis, motor vehicle crash deaths, and injuries from violence. Social costs and benefits from alcohol use, such as tax revenues, are also discussed. In keeping with WHA resolutions calling for comprehensive national alcohol programmes, the status and importance of national implementation of various alcohol policies are described, including education and health promotion, regulation of physical availability, taxation, product labeling, regulation of promotion, and deterrent strategies. A conclusion reiterates the importance of national programmes and policies for preventing a global epidemic of alcohol-related harm.

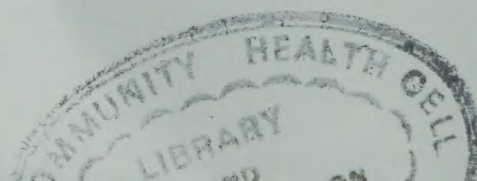
Following the overview are country profiles for all Member States for which sufficient data were available. These profiles include information about alcohol use, including trends in adult per capita consumption as well as prevalence data; health and social problems, including morbidity and mortality from alcohol-related causes; policies designed to control alcohol products and problems; and data collection, research and treatment activities.

© World Health Organization 1999

This document is not a formal publication of the World Health Organization (WHO) and all rights are reserved by the Organization. The document may, however, be freely reviewed, abstracted, reproduced or translated, in part or in whole, but not for sale or for use in conjunction with commercial purposes.

The views expressed in documents by named authors are solely the responsibility of those authors.

DIS-380
07450 n99



Contents

Acknowledgements

vii

Foreword

viii

Part I – Global Overview

Introduction

1

WHO data sources and methods

2

Types of alcohol products

4

Alcohol consumption

6

Drinking prevalence

9

Alcohol industry

20

Health effects

32

Alcohol control policies

37

Conclusion

48

60

Part II – Country Profiles

The African Region

61

Algeria

62

Angola

63

Benin

64

Botswana

64

Burkina Faso

66

Burundi

67

Cameroon

68

Cape Verde

70

Central African Republic (the)

71

Chad

71

Comoros (the)

72

Congo (the)

73

Côte d'Ivoire

74

Democratic Republic of the Congo (the)

75

Ethiopia

75

Gabon

76

Gambia (the)

77

Ghana

78

Guinea

79

Guinea-Bissau

80

Kenya

81

Lesotho

83

Liberia

85

Madagascar

86

Malawi

86

Mali

87

Mauritania

88

Mauritius	88
Mozambique	90
Namibia	91
Niger (the)	93
Nigeria	94
Rwanda	96
Senegal	97
Seychelles	98
Sierra Leone	99
South Africa	100
Swaziland	103
Togo	104
Uganda	105
United Republic of Tanzania (the)	106
Zambia	108
Zimbabwe	109

The Region of the Americas

Antigua and Barbuda	113
Argentina	113
Bahamas (the)	115
Barbados	116
Belize	118
Bolivia	119
Brazil	121
Canada	124
Chile	129
Colombia	131
Costa Rica	133
Cuba	135
Dominican Republic (the)	137
Ecuador	138
El Salvador	140
Guatemala	141
Guyana	143
Haiti	143
Honduras	144
Jamaica	146
Mexico	147
Nicaragua	151
Panama	152
Paraguay	154
Peru	155
Puerto Rico	157
Suriname	159
Trinidad and Tobago	159
United States of America (the)	162
Uruguay	167
Venezuela	169

The Eastern Mediterranean Region

Afghanistan	172
Bahrain	173
Cyprus	174

Djibouti	175
Egypt	176
Iraq	177
Jordan	178
Lebanon	179
Morocco	180
Oman	181
Pakistan	182
Qatar	183
Saudi Arabia	184
Sudan (the)	185
Syrian Arab Republic (the)	186
Tunisia	187
United Arab Emirates (the)	188
Yemen	189

The European Region

Albania	191
Armenia	192
Austria	194
Azerbaijan	197
Belarus	199
Belgium	201
Bosnia and Herzegovina	204
Bulgaria	204
Croatia	207
Czech Republic (the)	209
Denmark	211
Estonia	215
Finland	219
France	223
Georgia	227
Germany	229
Greece	232
Hungary	235
Iceland	239
Ireland	241
Israel	245
Italy	247
Kazakhstan	250
Krygyzstan	252
Latvia	254
Lithuania	257
Luxembourg	260
Malta	262
Netherlands (the)	265
Norway	268
Poland	272
Portugal	275
Republic of Moldova (the)	278
Romania	281
Russian Federation (the)	283
Slovakia	286
Slovenia	289

Spain	291
Sweden	294
Switzerland	298
Tajikistan	302
The Former Yugoslav Republic of Macedonia	303
Turkey	305
Turkmenistan	306
Ukraine	309
United Kingdom of Great Britain and Northern Ireland (the)	312
Uzbekistan	316
Yugoslavia	318
The South-East Asian Region (SEARO)	
Bangladesh	319
Bhutan	320
Democratic People's Republic of Korea	321
India	321
Indonesia	325
Maldives	326
Myanmar	327
Nepal	328
Sri Lanka	330
Thailand	332
The Western Pacific Region (WPRO)	
Australia	335
Brunei Darussalam	339
Cambodia	340
China	341
Cook Islands	344
Fiji	345
Japan	347
Kiribati	350
Lao People's Democratic Republic (the)	350
Malaysia	351
Marshall Islands (the)	355
Micronesia (Federated States of)	355
Mongolia	356
New Zealand	357
Palau	362
Papua New Guinea	363
Philippines (the)	365
Republic of Korea (the)	366
Saint Kitts and Nevis	368
Samoa	369
Singapore	370
Solomon Islands	372
Tonga	374
Viet Nam	375
References	377

Acknowledgements

WHO gratefully acknowledges the assistance of its collaborators in the WHO Member States who provided data and information for, and comments on, drafts of the country profiles. The cooperation of all WHO regional offices in helping to assemble and validate the content of the profiles is also gratefully acknowledged. Assistance in identifying and reviewing information for the various regions of WHO was also provided by the following: Dr. Sally Casswell (Western Pacific Region), Dr. Hao Wei (China), Dr. Charles Parry (African Region), Dr. Shekhar Saxena (South-East Asia Region), Dr. Vladimir Egorov (European Region), Dr. Jacek Moskalewicz (European Region), Dr. John Dunn (Region of the Americas), and Dr. Ronaldo Laranjeira (Region of the Americas).

The Pan American Health Organization (PAHO), and in particular Dr. Enrique Madrigal and Dr. Edna N. Roberts, provided extensive data and data sets for the creation of profiles for the countries of the Region of the Americas, including data from the PAHO Technical Information System maintained by the PAHO Health Situation Analysis programme. The European Regional Office provided unpublished profiles of alcohol consumption, problems and policies in European countries produced by Ms. Anna Mae Harkin. Their cooperation is gratefully acknowledged. WHO also wishes to acknowledge the Food and Agricultural Organization of the United Nations for permission to use statistics on alcohol consumption from the FAOSTAT Statistical Database, and the Commodity Board for the Distilled Spirits Industry for permission to use data on alcohol consumption published in *World Drink Trends*.

WHO also wishes to acknowledge the generous financial support of the Swiss Federal Office of Public Health, the Department for International Development, United Kingdom (DFID), and the Swedish International Development Cooperation Agency (SIDA). The Marin Institute wishes to acknowledge the Beryl Buck Trust and the United Methodist Church Special Program on Substance Abuse and Related Violence for additional support for the Marin Institute's contributions to the project.

This document was initiated under the general direction of Dr. Alan Lopez, Acting Programme Manager of the WHO Programme on Substance Abuse, and completed under the general direction of Dr. Mary Jansen, Director of the WHO Substance Abuse Department (WHO/SAB), between the years 1996 and 1999. Mr. David Jernigan of the Marin Institute for the Prevention of Alcohol and Other Drug Problems prepared the Global Overview, and coordinated production of the country profiles in Part II, with research assistance from Mr. Chris Cefalu. Preparation of the document was supervised by Dr. Maristela Monteiro, Ms. Leanne Riley and Mr. Martin Donoghoe of WHO/SAB. Ms. Nicole Becker of the Marin Institute assisted with data entry, and the Marin Institute Resource Center staff, and in particular Ms. Eris Weaver, provided invaluable support. Dr. Robin Room and Dr. James F. Mosher also provided valuable comments on the Global Overview. At WHO, Ms. Joy Moser assisted with data collection in early stages of the project, and Ms. Marie-Hélène Schreiber provided assistance with data entry. Mr. Victor Salvo assisted with the management and translation of electronic data. Thanks are also due to Ms. Margaret Ndowa and Ms. Sarah Boone for their careful editing of the final document and to Mr. Milton Bernardes who was responsible for art direction and lay-out.

Foreword

On behalf of the Substance Abuse Department of the World Health Organization, I am pleased to present this Global Status Report on Alcohol. This volume is the culmination of over four years of dedicated work by WHO HQ, the Marin Institute in California, USA, in consultation with a large number of consultants, researchers, and all the WHO Regional Offices.

The genesis of this work was the growing recognition of the significant contribution of alcohol to the global burden of illness, disability and death. In 1990, WHO estimated that alcohol accounted for 3.5 percent of the total of all Disability Adjusted Life Years (DALY) lost to disease and disability in the world. Both developed and developing countries are affected by this burden. This figure is however, most likely a gross underestimate of the true burden of alcohol to society. Although an attempt was made to estimate the indirect health effects such as disability and death from domestic violence, aggravated assault, motor vehicle accidents, suicide, and boating accidents where alcohol is thought to have played a part, these were only roughly estimated. The true estimation of the adverse health, social and economic costs of excessive alcohol consumption has yet to be calculated.

Although recorded alcohol consumption has fallen since 1980 in most developed countries, it has risen steadily in developing countries and in the countries of the former Soviet Union. Male life expectancy has actually declined in the Russian Federation and this can be linked at least in part to rapid increases in unrecorded alcohol consumption since the collapse of the Soviet Union. The rise in alcohol consumption in these and other developing nations where health and economic systems are weakest, is of great concern to WHO.

Despite the wealth of information presented in this Report much more information is needed. Countries frequently have very limited data on actual alcohol consumption, on patterns of use and on problems specifically related to specialized patterns of drinking. Additionally, we know that the measures used to estimate alcohol consumption and related harm are not satisfactory, such as those that try to estimate unrecorded production and consumption (from smuggling, illicit production, home production) or alcohol related violence and crime. I hope that recognition of these weaknesses will encourage all Member States to work even more closely with WHO to collect more and better data.

No volume describing the adverse health effects of alcohol can be presented without clarifying the beneficial effect that use of alcohol at low levels may have for some segments of the population. Research over the past decade, primarily in developed countries, has shown that for some adults at high risk of coronary heart disease and stroke, small amounts of alcohol can lower the overall risk from these disorders. The lower limit has yet to be firmly established but some research has shown that the full benefit can be achieved with as little as one drink per week. It must be noted that this beneficial effect pertains only to those at high risk in a certain age range, e.g., men over forty-five years of age and post menopausal women in countries where there is a high prevalence of these disorders, e.g., mainly developed countries, as these disorders are not prevalent in most developing countries. This beneficial effect does not apply to the general population and consumption of larger quantities of alcohol by those at high risk of these disorders can actually increase their risk.

The publication of this Report marks the formal beginning of WHO's new Global Alcohol Initiative which is a comprehensive effort to conduct and synthesize research, distil information based on the best available evidence, and provide technical assistance and policy guidance to Member States. I am confident that this Initiative will form the strategic basis for filling the gaps in our knowledge base. This Global Status Report on Alcohol is the first step in this process and I hope that this volume will be of use to clinicians, researchers, and policy makers throughout the world.

Dr. Mary Jansen
Director, Substance Abuse Department
World Health Organization
December, 1999

PART I

Alcohol: A Global Overview

Introduction

Alcohol-related death and disability account for even greater costs to life and longevity than those caused by tobacco use, according to the global burden of disease study sponsored by the World Health Organization (WHO) and the World Bank. This study put alcohol’s global health impact on a par with unsafe sex and above tobacco in terms of its contribution to the total number of years of life lost to death and disability as recorded in Disability Adjusted Life Years (DALYs) (Murray & Lopez, 1996). In addition to chronic diseases that may affect drinkers after many years of heavy use, alcohol contributes to traumatic outcomes that kill or disable at a relatively young age, resulting in the loss of many years of life to death or disability. In terms of mortality, even if allowance is made for alcohol’s protective effect against heart disease, net deaths from alcohol totalled more than three-quarters of a million in 1990. Eighty per cent of this excess mortality occurred in the developing regions of the world. According to the global burden of disease study, morbidity from alcohol, measured in years of life lost to disability, has a greater impact on health than even malnutrition or poor sanitation (see Table 1).

Table 1. Global burden of disease and injury attributable to selected risk factors, 1990

RISK FACTOR	DEATHS (THOUSAND)	AS % OF TOTAL DEATHS	YEARS OF LIFE LOST (THOUSANDS)	AS % OF TOTAL YEARS OF LIFE LOST	YEARS OF LIFE DISABLED (THOUSAND)	AS % OF TOTAL YEARS OF LIFE LOST	DISABILITY- ADJUSTED LIFE YEARS (DALYS) (THOUSANDS)	AS % OF TOTAL DALYS
Malnutrition	5 881	11.7	199 486	22.0	20 089	4.2	219 575	15.9
Poor water supply, sanitation and personal hygiene	2 668	5.3	85 520	9.4	7 872	1.7	93 392	6.8
Unsafe sex	1 095	2.2	27 602	3.0	21 100	4.5	48 702	3.5
Tobacco	3 038	6.0	26 217	2.9	9 965	2.1	36 182	2.6
ALCOHOL	774	1.5	19 287	2.1	28 400	6.0	47 687	3.5
Occupation	1 129	2.2	22 493	2.5	15 394	3.3	37 887	2.7
Hypertensio n	2 918	5.8	17 665	1.9	1 411	0.3	19 076	1.4
Physical inactivity	1 991	3.9	11 353	1.3	2 300	0.5	13 653	1.0
Illicit drugs	100	0.2	2 634	0.3	5 834	1.2	8 467	0.6
Air pollution	568	1.1	5 625	0.6	1 630	0.3	7 254	0.5

Source: Murray & Lopez, 1996

While recorded alcohol consumption among adults has fallen steadily in most developed countries since 1980, it has risen steadily in the developing countries and countries of the former Soviet Union. The decline in male life expectancy in the Russian Federation is a cautionary tale of the health dangers inherent in an alcohol market out of control (Leon et al., 1997; Kauhanen et al., 1997; McKee & Britton, 1998). This is, at least in part, the result of rapid increases in unrecorded (resulting from domestically and/or illicitly produced and sold alcoholic beverages) alcohol consumption since the collapse of the Soviet Union. The rise in alcohol consumption in developing countries provides ample cause for concern over the possible advent of a matching rise in alcohol-related problems in those regions of the world most at risk.

In 1980, WHO and the Addiction Research Foundation (Canada), with the help of contributors from more than 80 countries in the six WHO regions, published a review of alcohol-related prevention measures, policies and programmes (Moser, 1980). However, despite alcohol's importance as a risk factor to world health, there has been no systematic global analysis of the epidemiology of alcohol use and related harm since then. Given alcohol's significance in world health, the Substance Abuse Department of the World Health Organization (WHO/SAB) has prioritized monitoring and providing guidelines for controlling health problems attributable to alcohol. This report, modelled on WHO's earlier *Global Status Report on Tobacco or Health* (WHO, 1997), seeks to document what is known about alcohol's impact on health worldwide, what is being done by national governments to ameliorate that harm, and what is needed on a global basis to prevent and reduce alcohol-related injury and disease.

To create this report, WHO/SAB undertook a major exercise in passive epidemiological surveillance, gathering published and fugitive data and information about key aspects of the alcohol situation in WHO Member States. This is the first time such global surveillance has been attempted, and the findings reveal the shortcomings of global alcohol epidemiology. Estimates of per capita alcohol consumption, where they exist, have heretofore generally come from alcohol industry sources rather than health authorities, who often do not have the resources to monitor alcohol use. Although studies of drinking patterns and behaviour have been conducted in some countries, the lack of a global consensus on survey questions, time frames and definitions of terms such as heavy drinking renders the data inconsistent, difficult to interpret, and not comparable cross-nationally. WHO is currently supporting the development of international guidelines for monitoring alcohol consumption and harm (WHO, unpublished) that in the longer term will improve the quality and comparability of alcohol-related data.

Data on the consequences of alcohol use either do not exist, due to the failure to define alcohol as a problem and devote resources to measuring its impact, or lie hidden in statistics for harms to which alcohol is a substantial contributing factor, such as motor vehicle-related trauma, interpersonal violence, suicide, and chronic disease. Much of the data on drinking and its consequences are weak, relying on small surveys or anecdotal or descriptive accounts. In some countries, where drinking patterns would suggest that alcohol takes a heavy toll on health, no data exist on the magnitude of the toll. For some populations, production of alcohol and drinking itself are illicit activities. Here alcohol consumption cannot be measured, but only estimated. In countries with substantial informal economies, much domestic production of alcohol, whether legal or illegal, may go unrecorded. Efforts in this report to adhere to well-documented sources result in the under-estimation of much of this unrecorded alcohol production and consumption.

Thus, the picture this report provides of alcohol consumption and world health is, in many respects, incomplete. The report stands as a picture as much of the state of knowledge as of the state of world health related to alcohol. The evidence it gives regarding alcohol's importance to health will hopefully stimulate further efforts to document alcohol use, problems and policies in WHO Member States.

Part I of this report presents comparative analyses of the alcohol situation on a regional and global basis, including comparisons of individual countries using indicators such as alcohol use, mortality trends, production and trade, as well as a summary of control policies being used. Part II presents individual country profiles, bringing together information on each of these indicators with a description of alcohol control measures for each Member State for which data were available.

WHO data sources and methods

WHO has established a database providing a standardized reference source of information for global epidemiological surveillance of alcohol use and related problems. The database brings together a large amount of information on the alcohol and health situation in individual countries and, wherever possible, includes trends in alcohol use and related mortality since 1970. WHO has also collected information on alcohol production, trade, consumption, and health effects, as well as on national alcohol control measures, policies and programmes. In addition to large international databases maintained by other international governmental organizations, more than 850 published sources have been identified and consulted.

Indicators were chosen to assess the most important aspects of the alcohol situation in WHO Member States as they relate to public health. For most countries, this report includes data and information on these indicators from the early 1990s. Wherever possible, later data or estimates have been used. The indicators may be grouped into seven broad categories:

1. *The sociodemographic situation.* The indicators include those of specific relevance to the assessment of alcohol use and alcohol-related problems, e.g. population age structure, life expectancy, national wealth, labour force structure and urbanization. For purposes of international comparability, this information was obtained from such sources as the United Nations Department for Economic and Social Information and Policy Analysis, the former WHO Division of Health Situation and Trend Assessment, the United Nations Development Programme, the United Nations Statistical Office, and the World Bank's *World Development Reports*. The population and health status information reported in the country profiles were taken from official estimates and projections published by the United Nations Population Division, except when contradicted by Member State governments themselves in correspondence with the authors of this report.
2. *Alcohol production, trade, and industry.* Data on alcohol production and trade came from several sources. For countries in the WHO European Region, the primary source for estimates of alcohol production were those published in the WHO European Regional Office's Health For All Database. For 24 other countries, data published in *World Drink Trends (Produktschap voor Gistilleerde Dranken, 1997)* by the Commodity Board for the Dutch Distilled Spirits Industry were consulted. All available data on alcohol production and trade were also obtained from the Food and Agricultural Organization of the United Nations (FAO) statistical databases (FAOSTAT) and the United Nations Statistical Office. In addition, the estimates published here drew on sources covering individual countries or data sets provided by national governments. Company annual reports and publications serving the alcohol industry, as well as key informants in WHO Member States, were also consulted.
3. *Alcohol consumption.* Wherever possible, per capita estimates of alcohol consumption in each country were attempted, based primarily on production and trade data from the sources discussed above. These estimates rarely account for unrecorded consumption of smuggled or home- or informally-produced alcohol. Heavy alcohol consumption by tourists may result in overestimation of national alcohol consumption, just as patterns of frequent overseas or cross-border alcohol consumption may result in underestimation. Stockpiling, routine on the part of producers in the case of fine whiskies and wines, and not uncommon by distributors and retailers facing significant tax increases, can also result in erroneous estimates of per capita alcohol consumption. Per capita alcohol consumption estimates also cannot reflect population drinking patterns, although research done primarily in developed countries has found per capita alcohol consumption to be a fairly reliable proxy for heavy drinking in a population (Edwards et al., 1994). Where women drink

very little, or where there are large numbers of abstainers, per capita alcohol consumption estimates will underestimate actual drinking by drinkers. This report provides, where available, estimates of the prevalence of alcohol use, which may be combined with per capita alcohol estimates to provide a more realistic view of how much alcohol drinkers are drinking. Sources such as *World Drink Trends (Produktschap voor Gistijlfeerde Drinker, 1997)* or the WHO European Regional Office (WHO/EURO) Health for All Database that report per capita alcohol consumption for the entire population will underestimate adult alcohol consumption in countries where a comparatively large proportion of the population are children. This report attempts to correct this by providing estimates for adult per capita alcohol consumption, based on the population aged 15 years and above.

4. *The prevalence of alcohol use.* The indicators include data on prevalence of alcohol use in specific population subgroups such as young people, adults, males and females separately, occupational categories, other demographically defined categories such as racial/ethnic or religious groups, and groups defined by income or place of residence. These data were obtained from reviews of published studies in scientific publications, from conference reports and related documents, and from WHO Member States.
5. *The health effects of alcohol use.* Special emphasis is placed here on mortality due to drinking. For countries in the WHO European Region, data published in the Health for All Database were consulted. Data were also obtained for alcohol-attributable and alcohol-involved mortality from both the WHO Global Programme on Evidence and Information for Health Policy and the Pan American Health Organization (PAHO) Technical Information System. Additional data came from WHO Member States, WHO regional offices, conference reports, related documents, and published studies in scientific journals. Age standardized death rates were calculated using the World Standard Population based on the years 1950 to 1957, the years closest to the years for which data were collected (provided by the WHO Programme on Evidence and Information for Policy).
6. *National policy responses.* These include legislation, education, and the organization of alcohol control activities in each country. Much of this information was provided directly by WHO Member States and key informants. Information was also obtained from published articles and reviews in the scientific and industry literature, and from the popular and business press.

Data and information for the country profiles were assembled from existing reports, publications, and other documents available to WHO. For some indicators, different sources provided inconsistent or conflicting information. A number of sources, including key informants, were then consulted, and decisions made on a case-by-case basis after a thorough analysis of all available data. In the preparation of this report, every attempt was made to include accurate and up-to-date information, available as of mid-1998. Once this basic data collection phase was completed, a set of summary profiles were prepared, supplemented by data and information provided by key informants in each WHO region. The profiles were sent to the WHO regional offices for amendments, validation and clearance, and then subjected to another round of revision, followed by another review by the WHO regional offices.

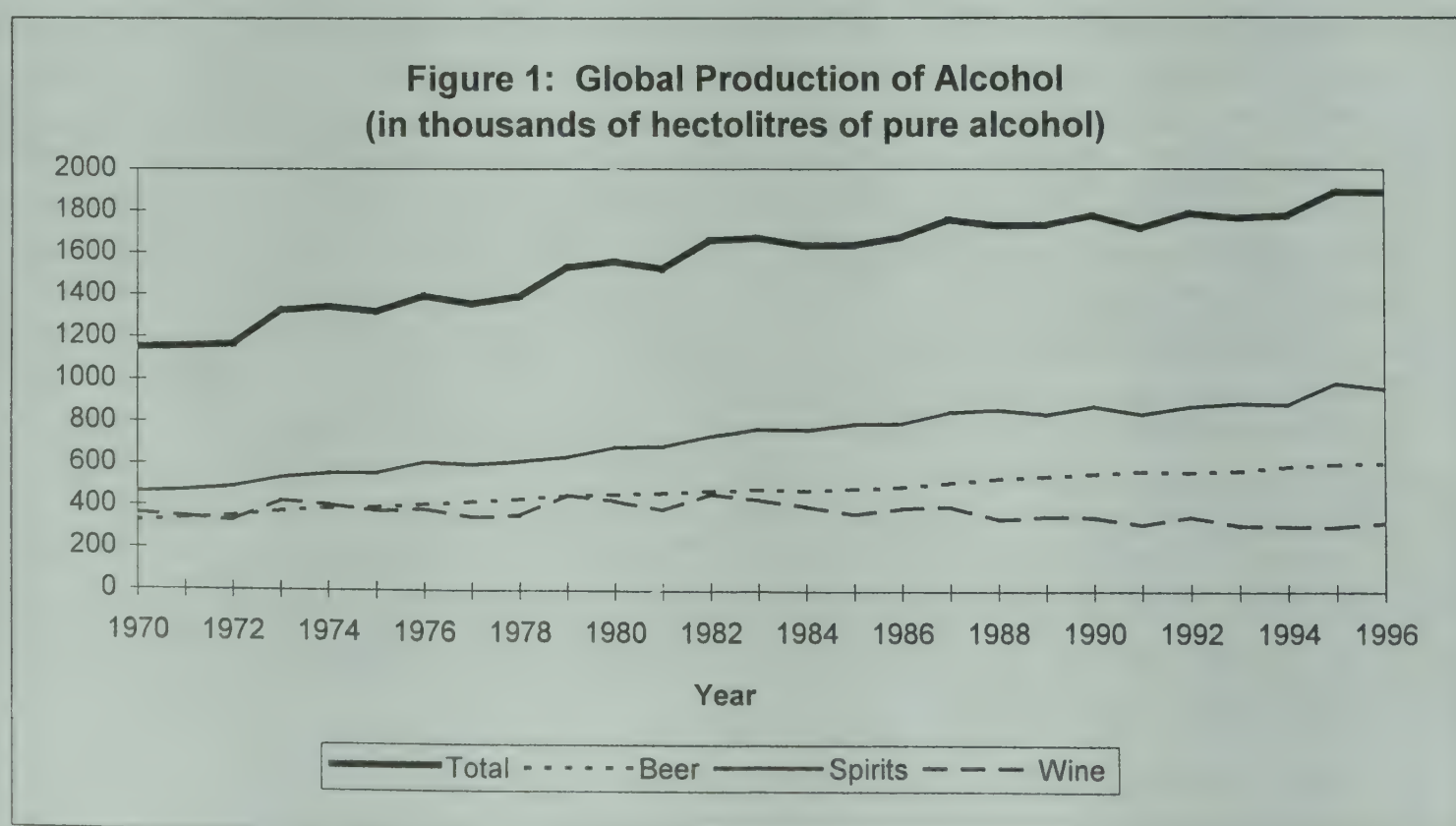
Despite the efforts made by WHO to obtain and validate data and information, many gaps in, and uncertainties about, the actual alcohol and health situation in WHO Member States remain. WHO therefore encourages comments or additional information from readers of this report, in order to improve the reliability of its global epidemiological surveillance and thereby increase the usefulness of this information in supporting efforts to reduce alcohol-related problems worldwide. Any information, comments or suggestions may be sent directly to: Substance Abuse Department, WHO, 20 Avenue Appia, 1211 Geneva 27, Switzerland.

Types of alcohol products

There is an extremely broad range of types of alcohol available around the world. Beverage alcohol has been present in nearly all societies, with the possible exception of certain previously existing societies of Oceania, and North America north of the Mexican border (Hill, 1984). Wine, which generally ranges in strength from 10 to 14 per cent alcohol, and beer, which can range from 0.5 per cent to as high as 14 per cent alcohol, have been present for at least 5000 years. Distilled spirits, which may contain as low as 20 per cent but usually have upwards of 35 per cent pure alcohol, first appeared in European records in the twelfth century. Wine can be made from a wide variety of fruits, and can then be further distilled or combined with other ingredients to create brandies, cognac, cordials and liqueurs. Distilled spirits can also come from a wide range of raw materials, including cane and beet sugars, potatoes, corn, barley, wheat and other grains. Beer is primarily made from barley or sorghum, although other grains are occasionally used and rice is often employed as a starch.

As the end of the twentieth century approaches, the range of alcohol products may be divided into two categories: global commodities and local products.¹ Within these two categories, there is wide variation. The category global commodities encompasses those alcoholic beverages present in international trade. These tend to fall into three primary categories: beer from barley, wine from grapes, and certain distilled spirits. Although ciders and wines from sources other than grapes (e.g. palm wine or *toddy*) are popular in some regions, they do not appear in any quantity in international trade or in the alcohol consumption patterns of more than a few countries.

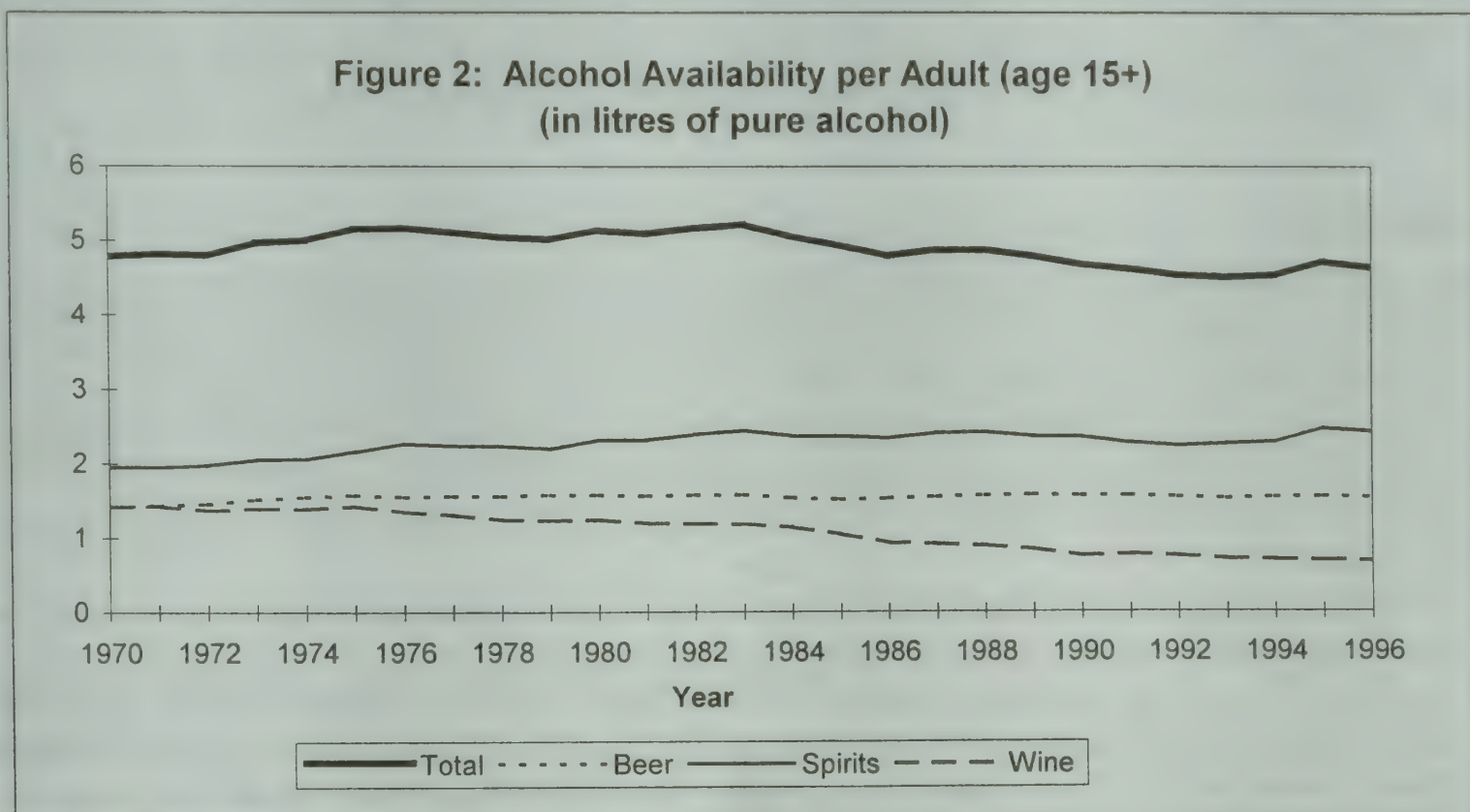
Data from the Food and Agricultural Organization (FAO) of the United Nations indicate that the production of beverage alcohol worldwide has grown steadily since 1970. However, this growth has not been equivalent across categories. Figure 1 shows that while production of beer and distilled spirits has risen, production of wine has generally fallen. The increase in distilled spirits production is probably even greater than that shown in Figure 1.



Source: FAO Statistical Databases 1998

¹ Throughout this document, "local products" is used synonymously with the terms home-produced, domestically-produced, and informally-produced alcohol. The consumption of these products is in the main unrecorded.

Analysis of the FAO data at the country level shows that the countries of the former Soviet Union have recorded a dramatic decrease in spirits production. However, such a large decrease is unlikely, and probably reflects a shift in production to illegal spirits production or importation, which would then not appear in recorded production figures.



Sources: FAO Statistical Databases 1998; *Produktschap voor Distilleerde Dranken*, 1997; United Nations Population Division 1994.

Alcohol availability expressed as litres absolute of alcohol available per adult aged 15 years and over is a rough proxy measure for adult per capita consumption of alcohol. Figure 2 shows the recorded global availability of alcohol per adult. Availability is calculated as production plus imports and additional stocks, minus exports.

The figure shows that alcohol availability per adult appears to have declined since its peak in 1983. This is, in part, because of the growth in the global population of adults and not because of any overall reduction in global alcohol production. Alcohol consumption has fallen in developed countries. Globally, the availability of spirits has gradually increased, beer has kept up with population growth and wine has lagged behind it.

This report focuses on the three dominant industrial categories or types of alcoholic beverages: beer, distilled spirits and wine. Ciders, *pulque*, *shochu* and other more localized beverages are either not covered in the statistics on which this report is based, or have been included in the other main categories. Wherever possible adjustments or additions have been made to account for these failings in the statistics. However, the focus remains on the three main categories.

Beer

Beer is available in nearly all countries, and much of it comes from transnational producers, their subsidiaries, joint ventures, or local partners. There is a wide range of variations, including low or "no-alcohol" beers (ranging from 0.5 to 2.5 per cent pure alcohol), as well as stronger stouts, ales and other malt-based products that can reach as high as 14 per cent alcohol. Facing intense competition in the mature markets of the developed world, brewers have created a number of variants: ice beer, dry beer, light beer, clear beer, and so on. Most beer is in the range of four to six per cent alcohol, although in countries such as Australia and New Zealand consumption of lower alcohol beers, in the range of 2.5 per cent alcohol, is being encouraged by public health authorities. Modern computerized industrial manufacturing has lowered the costs of producing beer in very large quantities, and advanced brewing technology has spread rapidly around the world, with large new breweries taking advantage of the economies of scale inherent in the manufacturing process.

In sub-Saharan Africa, a tradition of brewing beer from sorghum continues. Such brewing may follow traditional, home or communal methods, but has also been augmented and in some cases replaced by industrial methods of mass-producing beer from sorghum. Since sorghum beer spoils quickly, mass centralized production has relied on the development of modern roadways and methods of transport. Sorghum beer is not normally included in international figures on beer production and trade. Estimates of alcohol consumption in this document reflect the bias towards malt beer of the international sources, but where available, data on sorghum beer have also been included.

Distilled spirits

According to a leading alcohol industry market research firm (Impact Databank, 1995), approximately 54 per cent of distilled spirits worldwide are so-called traditional or local products. Some previously local products have become global commodities, such as Scotch whisky and *tequila* which are now industrially produced and traded internationally. Others are still made with low levels of technology, some of which are traditional to various regions, and some of which (for example the *kachasu* or “kill-me-quick” of Southern Africa) involve the use of whatever “strengthening” agents are available, including battery acid.

Using local agricultural inputs, local products include those particular to regions and countries, such as the *aguardiente* or cane spirits of parts of Latin America; Korea’s *shochu*, Mexico’s *pulque* or India’s *arrack*; as well as products peculiar to local ethnic or tribal groups. Local products are sometimes produced for home use and sometimes for trade in the informal sector of developing economies. Some products figure prominently in formal national economies, as the line between this category and global commodities becomes less clear.

Distilled spirits vary widely in strength, as the distillation process may produce liquids with very high alcohol content. Spirits of more than 50 per cent alcohol (100 proof) are rare in international trade, but local products of such strength may pose health hazards through their presence in informal economies. Some local varieties of spirits do not appear in figures recorded by national or international sources, because they are often produced for home consumption or for the informal economy. They are not captured in tax, retail sales, or industrial commodity reporting. Where available, data on local spirits have been included in efforts to estimate consumption in this report.

Wine

Wine is the smallest of the three main types of alcoholic beverages, both in volume and in pure alcohol consumed. An oversupply of wine on the world market has led some wine-making countries or regions to embark on intentional campaigns to reduce production, while others such as South Africa have put the grape surplus to work sweetening new ventures in non-alcoholic fruit juices. Wines usually range in strength from 10 to 14 per cent alcohol. Higher-alcohol grape-based products such as sherries and ports, cognacs and brandies, are generally classified as distilled spirits, although their alcohol content may be as low as 20 per cent.

Informal production of wine, whether from grapes or from other raw materials, is very difficult to measure. Even in developed countries like France, only rough estimates may be obtained of the amount of wine which, because it is made for home consumption, does not appear in official figures based on retail sales or tax records. Consumption estimates in the country profiles as well as a summary table, Table 4, in this overview include data on informal wine consumption where available.

Alcohol consumption

Estimates of per capita consumption of alcohol across the entire population aged 15 years or older can provide policy makers with some sense of the magnitude and trends likely to be found in alcohol-related problems. Among those who drink at all, the heaviest drinking 10 per cent typically account for 50 per cent or more of all alcohol consumed. Per capita alcohol consumption trends thus may be a good proxy for problems of chronic heavy drinking such as cirrhosis of the liver, but less so for problems typically more widely distributed such as alcohol-related traffic casualties (Edwards et al., 1994). Adult per capita alcohol consumption estimates can be indicative of the extent of alcohol-related problems.

Estimation methods, data sources, and data quality

Adult per capita alcohol consumption is generally estimated by dividing the sum of alcohol production and imports less alcohol exports by the adult population (aged 15 years or older). Alternately, countries may arrive at estimates by replacing production and trade data with figures derived from tracking retail sales or tax collection. As mentioned above, estimates relying on either method do not disaggregate tourist from resident alcohol consumption, nor can they measure resident alcohol consumption when abroad. Informal, home or domestic alcohol production is not in general captured by official figures. In some countries such production is extremely important and may account for as much as 80 per cent of the total alcohol available for consumption. The estimates in this report are also unable to account for stockpiling, whether by consumers or by retailers or wholesalers, nor do they include estimates of how much smuggled alcohol is consumed. Finally, the estimates tend to rely on gross estimates of average beverage strength (beer assumed to average 5 per cent alcohol, distilled spirits 40 per cent alcohol, and wine 12 per cent) in order to convert production and trade figures into estimates of pure alcohol consumed. This may lead to slight overestimation or underestimation of alcohol consumption in areas where the majority drink beverages substantially stronger or weaker than international averages (see WHO, in press, for further discussion).

Recognizing these limitations, the estimates of adult per capita alcohol consumption are the best available for monitoring global trends, since they cover more years and more countries than survey-based prevalence of alcohol use estimates (see Table 2). The largest data sets for alcohol production and trade lie with the Food and Agricultural Organization (FAO) and the United Nations Statistical Office. The problem with these data sets is that they rely in turn on figures supplied by national governments or by field or country representatives. Data are sometimes incomplete, unavailable, or estimated for several years at a stretch. Data for most of the developed countries and some developing countries are available from national governments, or from alcohol industry organizations such as the Commodity Board for the Distilled Spirits Industry. Their annual publication *World Drink Trends (Produktschap voor Gistilleerde Dranken, 1997)* uses nearly 100 sources to estimate alcohol consumption trends in 35 developed (including countries of the former Soviet Union) and 21 developing countries. This Global Status Report on Alcohol has drawn on their estimates, using FAO and other United Nations data to fill in gaps or provide insight into trends in other countries. Where data were available directly from countries, these were given priority over all other sources.

Total alcohol consumption

Sufficient data exist to estimate total recorded adult per capita consumption of pure alcohol in 153 countries. Table 2 provides these estimates, listed in order from heaviest to lightest consuming countries, for 1996, the most recent year for which data were available. The estimates rely on population data from the United Nations. Adult population figures (age 15+) were used to adjust for the differing age structures of national populations. Countries missing from the table were excluded because of missing data on alcohol production and trade, adult population, or both.

Table 2. Recorded per capita consumption of pure alcohol (litres) per adult 15 years of age and over in 1996

COUNTRY	TOTAL ¹	BEER	SPIRITS	WINE
Slovenia	15.15	5.76	0.89	8.50
Republic of Korea	14.40	2.41	11.97	0.02
Luxembourg	14.35	6.63	1.95	8.47
Czech Republic	14.35	9.83	2.03	2.49
Guyana	14.03	0.98	13.05	-
France	13.74	2.45	3.01	8.91
Portugal	13.57	3.75	0.97	8.81
Yugoslavia	13.17	3.48	4.57	5.12
Slovakia	13.00	5.79	5.14	2.07
Hungary	12.85	4.83	3.65	4.38
Denmark	12.15	7.15	1.35	4.13
Bahamas	12.09	1.08	9.82	1.18
Austria	11.90	7.04	1.82	4.59
Ireland	11.90	9.32	2.22	2.35
Croatia	11.75	4.38	1.75	5.62
Germany	11.67	8.01	2.50	3.26
Switzerland	11.27	3.65	1.81	6.30
New Caledonia	11.26	5.57	0.78	4.91
Spain	11.09	3.86	2.86	4.34
Belgium	10.94	6.20	1.34	3.65
Romania	10.88	2.37	5.01	3.49
Greece	10.41	2.33	3.23	4.88
Cyprus	10.00	3.40	4.55	2.05
Netherlands	9.80	5.13	2.16	2.51
Paraguay	9.71	3.19	6.15	0.37
Italy	9.62	1.41	1.06	7.74
Argentina	9.58	2.05	0.42	7.11
Australia	9.55	6.07	1.72	2.78
Bulgaria	9.52	3.25	3.09	3.18
United Kingdom	9.41	6.34	1.72	1.94
Venezuela	9.41	5.84	3.51	0.06
United States of America	8.90	5.36	2.43	1.12
New Zealand	8.85	6.11	1.51	2.59
Netherlands Antilles	8.78	4.61	3.37	0.80
Latvia	8.70	2.01	5.72	0.98
Thailand	8.64	0.88	7.73	0.02
Republic of Moldova	8.62	0.34	0.43	7.84
Barbados	8.37	2.82	5.10	0.45
Finland	8.26	5.06	2.40	1.12
Bosnia and Herzegovina	8.25	2.57	4.84	0.84

Table 2. Continued

COUNTRY	TOTAL ¹	BEER	SPIRITS	WINE
Uruguay	8.17	1.78	1.32	5.07
Belarus	8.14	1.08	6.49	0.57
Russian Federation	8.08	0.96	6.67	0.45
Estonia ²	8.07	2.08	5.85	0.14
Poland	7.93	2.62	4.24	1.06
Japan	7.85	3.21	2.62	0.14
South Africa	7.72	4.42	1.59	1.72
Kazakhstan	7.71	0.47	7.09	0.16
Canada	7.52	4.23	2.16	1.19
Chile	7.06	2.40	1.98	2.68
Malta	6.91	3.34	2.06	1.50
Philippines	6.77	1.51	5.25	0.01
Gabon	6.76	3.94	0.99	1.84
Haiti	6.55	0.01	6.53	0.01
Colombia	6.41	4.27	2.11	0.02
Lithuania	6.23	1.94	3.54	0.75
Sweden	6.04	3.64	1.44	1.97
Dominican Republic	5.90	2.12	3.70	0.08
Belize	5.85	2.62	3.14	0.09
Panama	5.74	3.45	2.19	0.09
Costa Rica	5.72	0.92	4.67	0.12
Liberia	5.68	0.18	5.49	0.00
Brazil	5.57	2.96	2.28	0.33
Lebanon	5.43	0.52	3.10	1.81
China	5.39	0.95	4.38	0.06
Mexico	5.04	4.11	0.89	0.04
Norway	4.97	3.27	1.02	1.13
Iceland	4.88	2.14	1.98	0.81
The former Yugoslav Republic of Macedonia	4.86	1.92	0.62	2.32
Suriname	4.68	3.07	1.55	0.06
Georgia	4.50	0.19	0.93	3.38
Mauritius	4.33	2.01	2.14	0.19
Azerbaijan	4.16	0.12	3.39	0.65
Lao People's Democratic Republic	4.12	0.33	3.79	-
Peru	4.00	1.63	2.21	0.17
Jamaica	3.90	1.78	2.06	0.06
Cape Verde	3.86	1.39	0.45	2.02
Trinidad and Tobago	3.69	1.48	2.14	0.07
Cuba	3.53	1.00	2.31	0.22
Bolivia	3.35	1.73	1.55	0.06
United Arab Emirates	3.06	1.20	1.70	0.16
Zimbabwe	2.78	0.19	2.53	0.05
Botswana	2.68	1.97	0.50	0.21
Albania	2.59	1.02	0.77	0.80
Democratic People's Republic of Korea	2.56	0.19	2.37	-
El Salvador	2.54	1.30	1.20	0.03
Honduras	2.41	1.24	1.15	0.02
Nicaragua	2.34	0.54	1.79	0.01
Ukraine	2.31	0.30	1.63	0.38
Kyrgyzstan	2.20	0.27	1.57	0.36

Table 2. Continued

COUNTRY	TOTAL ¹	BEER	SPIRITS	WINE
Singapore	2.10	1.33	0.65	0.12
Maldives	2.08	0.60	1.22	0.26
Guatemala	1.99	0.78	1.19	0.02
Mongolia	1.95	0.13	1.82	-
Fiji	1.82	1.62	0.02	0.18
Tajikistan	1.78	0.04	1.15	0.59
Israel	1.75	0.81	0.42	0.52
Ecuador	1.66	0.63	0.89	0.13
Kenya	1.66	0.87	0.77	0.01
Guinea-Bissau	1.59	0.39	0.73	0.47
Angola	1.58	0.62	0.41	0.55
Cameroon	1.58	1.53	-	0.05
Congo	1.56	1.22	0.05	0.30
Uzbekistan	1.55	0.00	0.07	1.48
Côte d'Ivoire	1.43	1.06	0.04	0.33
Benin	1.39	0.75	0.58	0.06
Turkey	1.35	0.82	0.43	0.10
Madagascar	1.25	0.16	0.95	0.13
Viet Nam	1.21	0.38	0.83	-
Swaziland	1.18	-	1.18	-
Burundi	1.17	1.16	0.01	0.01
Turkmenistan	1.17	0.09	0.95	0.13
Lesotho	1.12	0.75	0.33	0.04
Ethiopia	1.02	0.88	0.14	0.00
Papua New Guinea	1.02	0.90	0.10	0.03
Togo	1.01	0.66	0.20	0.15
India	0.99	0.04	0.95	0.00
Vanuatu	0.96	0.29	0.09	0.57
Eritrea	0.95	0.95	-	-
Tunisia	0.89	0.34	0.09	0.46
Malaysia	0.87	0.76	0.10	0.01
Armenia	0.84	0.00	0.27	0.56
Brunei Darussalam	0.75	0.20	0.52	0.03
Rwanda	0.71	0.70	0.01	0.00
Central African Republic	0.70	0.62	0.04	0.04
Nigeria	0.66	0.65	0.01	0.00
Zambia	0.63	0.62	0.01	0.00
Iraq	0.61	0.30	0.32	-
United Republic of Tanzania	0.60	0.51	0.09	0.00
Morocco	0.58	0.25	0.05	0.28
Solomon Islands	0.56	0.41	0.10	0.04
Egypt	0.53	0.05	0.47	0.01
Djibouti	0.47	0.26	0.10	0.11
Uganda	0.46	0.22	0.24	-
Mozambique	0.45	0.23	0.19	0.04
Burkina Faso	0.45	0.34	0.11	0.00
Malawi	0.42	0.12	0.30	0.00
Ghana	0.41	0.33	0.02	0.06
Senegal	0.41	0.30	0.03	0.09
Cambodia	0.34	0.14	0.20	-

Table 2. Continued

COUNTRY	TOTAL ¹	BEER	SPIRITS	WINE
Algeria	0.27	0.15	0.02	0.10
Sudan	0.26	-	0.26	-
Chad	0.23	0.22	0.00	0.01
Syrian Arab Republic	0.21	0.07	0.14	0.01
Sri Lanka	0.21	0.06	0.15	0.00
Myanmar	0.21	0.05	0.16	-
Democratic Republic of the Congo	0.21	0.20	0.00	0.00
Guinea	0.17	0.16	-	0.01
Gambia	0.16	0.05	0.05	0.06
Yemen	0.15	0.11	0.04	-
Indonesia	0.13	0.06	0.07	0.00

¹ Rows may not total exactly due to variations in estimates of alcoholic strength of each category in each country.

² The estimates for Estonia are for the year 1995, and come from the following sources: Statistical Office of Estonia, *Statistical Yearbook of Estonia 1996* (Tallinn, Statistical Office of Estonia, 1996), and Statistical Office of Estonia, *Foreign Trade* (Tallinn, Statistical Office of Estonia, 1996).

Sources: FAO Statistical Databases 1998; *Produktschap voor Distilleerde Dranken, 1997*; United Nations Statistical Office, 1997; United Nations Population Division 1994.

Table 3 compares total adult per capita consumption of pure alcohol in 1970-1972 and 1994-1996. Three-year averages have been used to minimize the impact of short-term temporal fluctuations in adult alcohol consumption. Data are available for both time periods for 137 countries, drawing again on *World Drink Trends* and on the FAO and UN statistical databases. The countries are listed in the order of magnitude of their percentage change in alcohol consumption. As the table demonstrates, developing countries and countries in transition¹ were more likely to increase their recorded adult per capita consumption of alcohol than the developed countries: 47 per cent of the developing countries or countries in transition increased since 1970, whereas 35 per cent of the developed countries recorded higher consumption of pure alcohol per adult.

Table 3. Trends in recorded per capita consumption of pure alcohol, (litres) per adult 15 years of age and over between 1970-1996

COUNTRY	1970-1972	1994-1996	PER CENT CHANGE
Lesotho	0.06	1.15	1816.67
China	1.03	5.17	401.94
Thailand	1.93	8.37	333.68
Guyana	3.59	14.45	302.51
Nigeria	0.23	0.68	195.65
Philippines	2.44	6.94	184.43
Malta	2.53	7.14	182.21
Republic of Korea	5.23	14.4	175.33
Pakistan	0.05	0.13	160.00
Rwanda	0.41	0.94	129.27
Dominican Republic	2.64	5.8	119.70
Burkina Faso	0.19	0.41	115.79
Sudan	0.12	0.25	108.33

¹ Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Croatia; Czech Republic; Estonia; Georgia; Hungary; Kazakhstan; Kyrgyzstan; Latvia; Lithuania; Poland; Republic of Moldova; Romania; Russian Federation; Slovakia; Tajikistan; The former Yugoslav Republic of Macedonia; Turkmenistan; Ukraine; Uzbekistan; Yugoslavia.

Table 3. Continued

COUNTRY	1970-1972	1994-1996	PER CENT CHANGE
India	0.45	0.93	106.67
Cyprus	5.02	10.37	106.57
Burundi	0.71	1.45	104.23
Mauritius	2.01	4.07	102.49
Liberia	2.97	5.9	98.65
Malaysia	0.45	0.89	97.78
Paraguay	4.72	8.83	87.08
Malawi	0.23	0.43	86.96
Guinea	0.15	0.28	86.67
Brazil	3.18	5.55	74.53
Egypt	0.31	0.54	74.19
Lebanon	3.45	5.72	65.80
Turkey	0.86	1.42	65.12
Indonesia	0.07	0.11	57.14
Albania	1.55	2.43	56.77
Benin	0.73	1.12	53.42
El Salvador	1.74	2.64	51.72
South Africa	5.07	7.69	51.68
Colombia	4.32	6.47	49.77
Cape Verde	2.69	3.95	46.84
Cuba	2.67	3.85	44.19
Costa Rica	4.15	5.97	43.86
Mexico	3.67	5.11	39.24
Iraq	0.46	0.62	34.78
Greece	7.88	10.62	34.77
Finland	6.19	8.27	33.60
Venezuela	7.06	9.28	31.44
Ireland	9.11	11.82	29.75
Japan	6.1	7.88	29.18
Lao People's Democratic Republic	3.43	4.43	29.15
Viet Nam	0.93	1.2	28.41
Denmark	9.42	12.08	28.24
Bolivia	2.64	3.38	28.03
United Kingdom	7.35	9.25	25.85
Romania	8.25	10.14	22.91
Barbados	7.47	9.07	21.42
Panama	4.75	5.62	18.32
Syrian Arab Republic	0.19	0.22	15.79
Zimbabwe	2.57	2.95	14.79
Gabon	5.93	6.8	14.67
Netherlands	8.53	9.75	14.30
Luxembourg	13.19	14.66	11.14
Uruguay	7.41	8.2	10.66
Bulgaria	9.13	9.8	7.34
Trinidad and Tobago	4.55	4.8	5.49
Honduras	2.32	2.41	3.88

Table 3. Continued

COUNTRY	1970-1972	1994-1996	PER CENT CHANGE
Ecuador	1.81	1.86	2.76
Poland	8.04	8.16	1.49
Cameroon	1.65	1.65	0.00
Ghana	0.46	0.46	0.00
Hungary	13.11	13.09	-0.15
Mongolia	2.05	2.03	-0.98
Ethiopia	0.96	0.95	-1.04
Botswana	2.84	2.8	-1.41
Norway	4.94	4.84	-2.02
Belize	5.9	5.76	-2.37
Czech Republic	14.63	14.28	-2.39
Swaziland	1.25	1.22	-2.40
Iceland	4.94	4.75	-3.85
Jamaica	4.19	3.98	-5.01
Togo	0.98	0.93	-5.10
Singapore	2.1	1.98	-5.71
Belgium	11.92	11.07	-7.13
Papua New Guinea	1.15	1.06	-7.83
United Republic of Tanzania	0.58	0.53	-8.62
United States of America	9.92	8.98	-9.48
Slovakia	13.75	12.37	-10.04
Kenya	1.78	1.6	-10.11
Netherlands Antilles	9.74	8.48	-12.94
Sweden	7.33	6.36	-13.23
Germany	13.81	11.88	-13.98
Australia	11.44	9.68	-15.38
Canada	9.16	7.62	-16.81
Haiti	6.93	5.72	-17.46
Switzerland	14.13	11.46	-18.90
Portugal	16.77	13.37	-19.60
Austria	14.97	11.91	-20.27
Central African Republic	0.96	0.76	-20.44
Morocco	0.73	0.58	-20.83
Democratic People's Republic of Korea	3.89	3.07	-21.08
New Zealand	11.58	9.11	-21.33
Sri Lanka	0.26	0.2	-23.08
Uganda	0.55	0.42	-23.64
Guatemala	2.35	1.79	-23.83
Tunisia	1.24	0.9	-27.42
Fiji	2.57	1.81	-29.57
Bahamas	17.42	12.15	-30.25
Spain	16.42	11.4	-30.57
Israel	2.48	1.72	-30.65
Solomon Islands	0.63	0.43	-31.75
Senegal	0.61	0.41	-32.79
France	21.37	14.02	-34.39

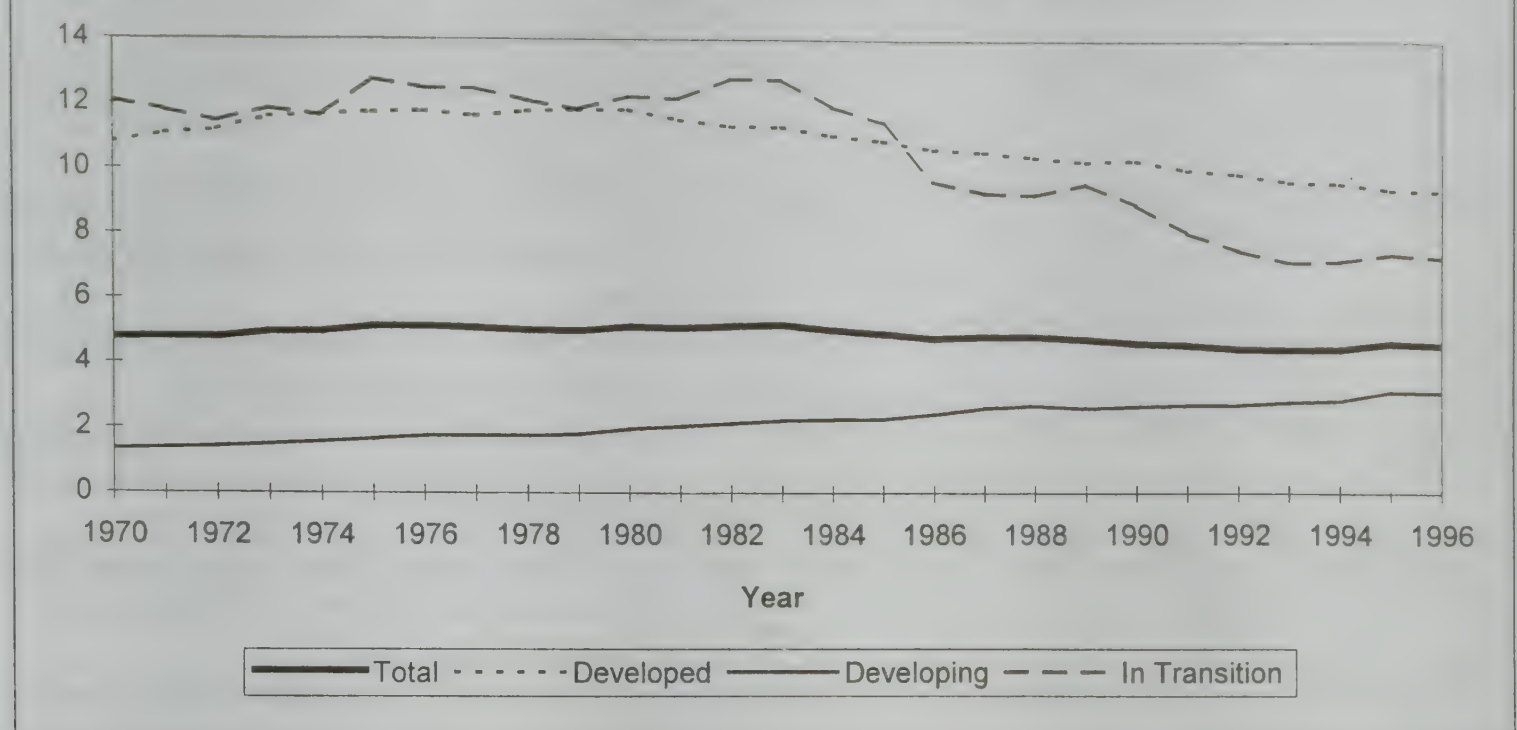
Table 3. Continued

COUNTRY	1970-1972	1994-1996	PER CENT CHANGE
Cambodia	0.6	0.39	-35.00
Côte d'Ivoire	1.95	1.26	-35.38
Madagascar	2.0	1.25	-37.50
Suriname	7.58	4.63	-38.92
Congo	2.94	1.78	-39.46
Peru	7.12	4.3	-39.61
Guinea-Bissau	2.76	1.62	-41.30
Myanmar	0.36	0.21	-41.67
Chile	13.01	7.46	-42.66
Chad	0.3	0.17	-43.33
Gambia	0.25	0.14	-44.00
Nicaragua	4.71	2.62	-44.37
Argentina	17.52	9.73	-44.46
Italy	18.08	9.72	-46.24
Niger	0.12	0.06	-50.00
New Caledonia	20.75	10.19	-50.89
Yugoslavia	23.28	11.26	-51.63
Brunei Darussalam	1.52	0.69	-54.61
Angola	4.17	1.78	-57.31
Algeria	0.68	0.27	-60.29
Mozambique	1.25	0.49	-60.80
Comoros	0.21	0.08	-61.90
Vanuatu	3.13	1.15	-63.26
Jordan	0.11	0.04	-63.64
United Arab Emirates	10.61	3.79	-64.28
Zambia	1.82	0.65	-64.29
Sierra Leone	0.3	0.1	-66.67
Yemen	0.55	0.17	-69.09
Mali	0.12	0.02	-83.33
Democratic Republic of the Congo	1.31	0.21	-83.97
Djibouti	3.27	0.48	-85.32
Mauritania	0.14	0.01	-92.86

Sources: FAO Statistical Databases 1998; United Nations Statistical Office 1997.

The story of the past 25 years is more dramatically told by looking at the trends in adult per capita consumption of pure alcohol by economic region, as shown in Figure 3. What was less clear in the rankings by country becomes more obvious when the data are aggregated by economic region: recorded adult consumption of pure alcohol peaked in 1979 in the developed countries and in 1983 in the economies in transition, while it has been rising unabatedly in the developing world since 1970. Overall, reported world alcohol consumption has been decreasing since the mid-1980s. However, as discussed above, it is unlikely that the decline in apparent alcohol consumption in the economies in transition, which appears to have fuelled this decrease, is as depicted. The large amount of illegal alcohol production and smuggling that has reportedly occurred since the break-up of the Soviet Union points to the importance of gathering information regarding unrecorded alcohol production and consumption.

**Figure 3: Recorded Adult (15+) Per Capita Consumption 1970-1996
by Economic Region (in litres of pure alcohol)**



Sources: FAO Statistical Databases; *Produktschap voor Distilleerde Dranken, 1997*; United Nations Population Division 1997.

Recorded versus unrecorded alcohol consumption

In the countries of the former Soviet Union, and in many developing countries as well, production for home use or for the informal sector is extremely important, reaching as high as 80 per cent of the total alcohol available for consumption. Few reliable data exist regarding consumption of these forms of alcohol. Table 4 below shows total alcohol consumption figures, adjusted for unrecorded production and trade, for the 20 countries for which data are available.

The table also provides a basis for those adjustments including a reference. All adjustments are derived from government or survey-based estimates. In some cases, particularly in developed countries such as Austria or Denmark, the adjustments are relatively small. In Eastern European, the Russian Federation and developing countries such as Ecuador and Kenya, the adjustments are substantial.

Table 4. Per capita consumption of pure alcohol (litres) per adult, 15 years of age and over adjusted for unrecorded production and trade

COUNTRY	YEAR	RECORDED	ADJUSTED	ADJUSTMENT
Austria (Uhl & Springer, 1994)	1994	11.91	12.62	Adjusted for legal production of pear, apple and grape ciders.
Brazil (Dunn & Laranjeira, 1996)	1996	5.07	14.01	Adjusted for government estimate of 1 billion litres of unrecorded pinga production.
Chile (PAHO, 1990)	1990	7.86	9.43	Increased by 20 % to allow for clandestine production.
Denmark (Nordic Alcohol Statistics, 1995)	1994	11.97	14.36	Increased by 20 % to reflect unrecorded consumption.
Ecuador (PAHO, 1990)	1990	2.10	8.40	Adjusted for clandestine production estimated at three times official production.
Estonia (Jernigan, 1997)	1995	8.07	10.74	Adjusted for police estimates that the black market represents 25 % of the total market.
Finland (Nordic Alcohol Statistics, 1995)	1994	8.16	9.79	Increased by 20 % to account for unrecorded consumption.
Greece (Gefou-Madianou, 1994)	1990	10.65	12.51	Increased by 1.5 litres per capita to reflect unrecorded consumption.

Table 4. Continued

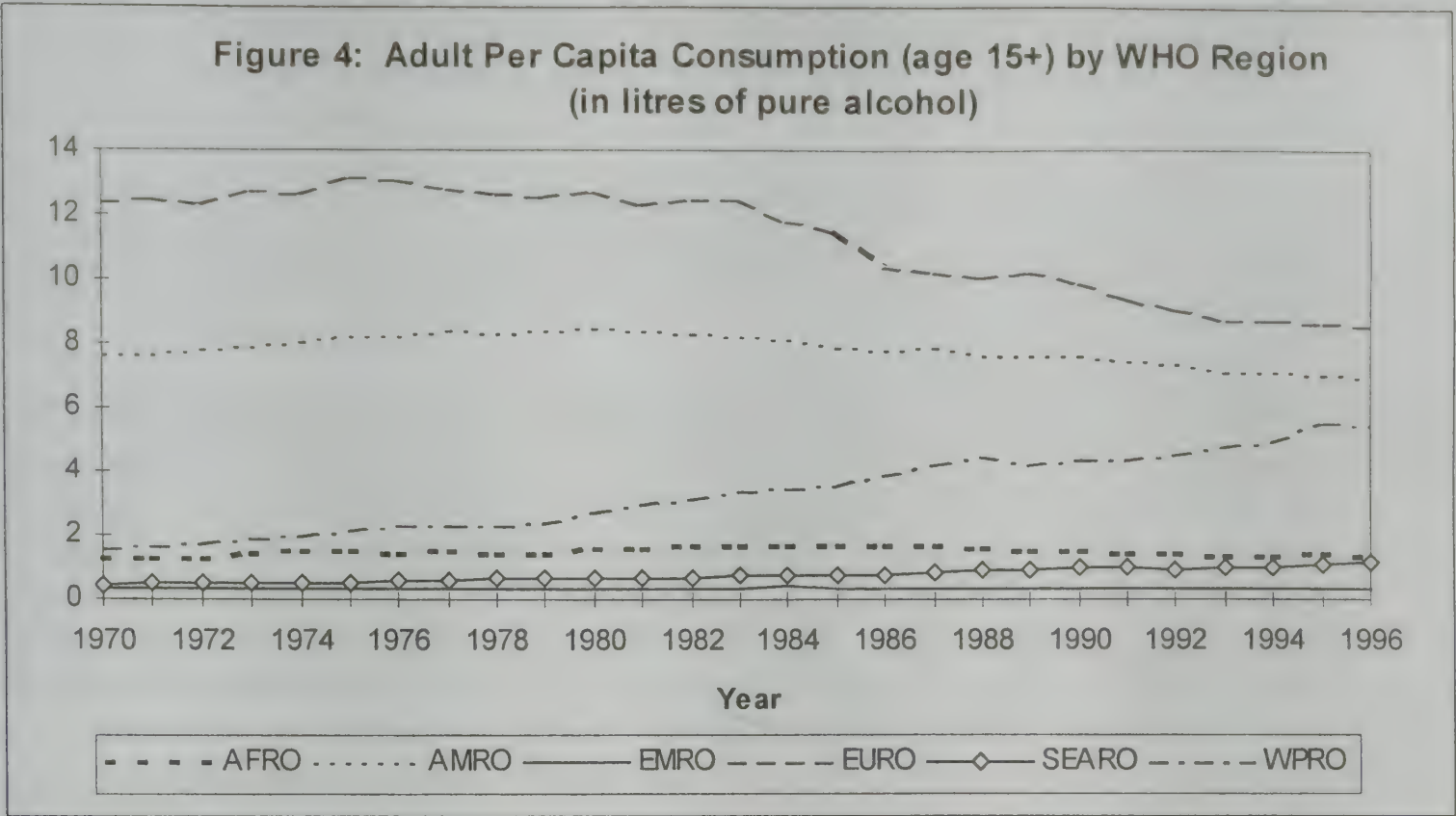
COUNTRY	YEAR	RECORDED	ADJUSTED	ADJUSTMENT
Hungary (Fekete, 1995)	1995	11.47	14.52	Increased by 2.5 litres per capita to reflect unrecorded alcohol consumption.
Iceland (Pálsson, 1995)	1994	4.63	5.52	Increased by 0.89 litres per capita to reflect tax free alcohol sales, home production and smuggled alcoholic beverages.
Kenya (Partanen, 1993)	1990	2.29	17.29	Adjusted to reflect the estimated 80-90 (85) % of total alcohol derived from the informal sector.
New Zealand (Casswell, 1997)	1995	8.92	9.19	Adjusted to reflect estimated 3% of total consumption that is unrecorded.
Norway (Nordic Alcohol Statistics, 1995)	1994	4.70	6.26	Adjusted to reflect unrecorded consumption totalling an estimated one-third of recorded consumption.
Republic of Moldova (Vasiliev, 1994)	1993	12.67	18.1	Adjusted to reflect estimate that unregistered consumption accounts for 70% of total consumption.
Russian Federation (Harkin, 1995)	1993	6.99	14.49	Adjusted to reflect estimate that per capita unrecorded consumption was 7.5 litres.
Slovenia (Cesabek-Travnik, 1995)	1993	14.90	24.19	Adjusted to reflect estimate that unrecorded consumption was between 7 and 8 litres per capita.
South Africa (Parry, 1997)	1995	7.81	10.0	Adjusted to include estimate of total production of beer from sorghum.
Sweden (Orjes, 1997)	1996	6.04	6.95	Adjusted to reflect estimate that 13 per cent of the alcohol consumed is illegal.
The former Yugoslav Republic of Macedonia (Jovev, 1993)	1992	6.33	12.66	Adjusted to reflect estimate that 50 per cent of total production is home made.
Ukraine (Krasovsky & Viyevsky, 1994)	1993	4.17	13.00	Adjusted to reflect estimate that total unrecorded consumption was 7.0 litres per capita.

Sources for recorded consumption estimates: *FAO Statistical Databases*; *Produktschap voor Distilleerde Dranken, 1997*; *United Nations Population Division 1994*.

Summary of Global Data on Adult Alcohol Consumption

Although estimates of recorded adult per capita alcohol consumption have limitations, both in terms of the accuracy of the data available and the limits of recorded data in general, they are the best data sets available for assessing global trends in alcohol use, and by extension, alcohol related problems. The following section discusses drinking patterns within the six WHO regions of the world. These regions do not conform to the developed/developing/in transition typology used above in Figure 3. For instance, the WHO Western Pacific Region (WPRO) includes Japan, Australia and New Zealand, as well as countries as economically and physically diverse as China and Kirabati. Maps of the countries included in each WHO region are provided.

Figure 4 below shows the trends in global adult alcohol consumption in the six WHO regions. The figure confirms what has already been described: in the regions with the highest levels of economic development, alcohol consumption tends to be the highest. It is falling most rapidly in the WHO European Region (EURO), and rising most rapidly in the WHO Western Pacific Region. Alcohol consumption in these two regions appears to be converging with the WHO Region of the Americas (AMRO) at the relatively high levels of approximately between 5-9 litres of pure alcohol per adult per year. The pace of declining alcohol consumption in EURO is undoubtedly overstated due to the large amounts of unrecorded alcohol production and consumption that have occurred since the break-up of the former Soviet Union. Alcohol consumption in the South-East Asian Region (SEARO) is rising slowly but at a much lower rate, as is the essentially stable alcohol consumption in the African (AFRO) and Eastern Mediterranean (EMRO) regions.



Sources: FAO Statistical Databases; Produktschap voor Distilleerde Dranken, 1997; United Nations Population Division 1994.

Drinking prevalence

Adult per capita alcohol consumption estimates may provide evidence of long-term trends, but they tell little about actual drinking in the population. In countries where the bulk of the drinking is done by a minority, for instance males from a single ethnic or religious group, per capita alcohol consumption figures can mask the extent of drinking and coerce policy makers into unwarranted complacency regarding likely health effects. A clear picture of who is drinking, how often and how much they drink may generally emerge only from data collected through population surveys of drinking. South Africa, for example, appears to have relatively moderate adult per capita alcohol consumption, at 7.72 litres of pure alcohol per person, gaining it the 45th rank in Table 2 which presents adult recorded per capita alcohol consumption in 1996. However, in the largest ethnic group, black Africans, comprising 75.2 % of the population, only 48 per cent of male adults and 23 per cent of female adults drink (Roche-Silva, 1990). Thus while a majority of black South African adults do not drink at all, average yearly intake of absolute alcohol among those who do is closer to 20 litres of absolute alcohol, a much higher level than the statistics would initially suggest.

Data sources and quality

Measuring drinking amounts and patterns is a complex matter. Different drinking patterns give rise to very different health outcomes in different population groups. Both quantity and frequency are crucial variables in determining health risks. Fourteen drinks at one sitting once per week carry very different health risks from two drinks a day, yet both may appear to be identical drinking patterns when viewed as a weekly average.

In practice, many developed countries have been able to perform annual or periodic household or other national surveys to ascertain both quantity and frequency, and have developed scales that incorporate both. However, there is little uniformity among these scales. When surveys have been done in developing countries, they have been more often oriented to populations considered at high risk of alcohol problems, such as young people or health care service users, and aimed at identifying problem rates of use rather than describing drinking patterns among the entire population. WHO is in the process of developing guidelines for countries seeking to collect data on drinking patterns, recommending standardized survey methods and questions (WHO, in press). In the absence of data from such standardized research, cross-national comparisons are difficult, and must be qualified with regard to the many different definitions and methods used.

Through surveillance of the published literature, available WHO documents and other North American and European collections, and in consultation with regional experts and WHO regional offices, more than 400 surveys of alcohol use were utilized in this report, describing patterns of use in 102 countries. Surveys were deemed acceptable for comparison if they randomly sampled national populations, or if they sampled substantial regional populations. Particularly in large ethnically diverse developing nations, such as Nigeria, regional samples may not be representative of the entire population, but were included in the absence of any national data. Samples of more than one thousand persons were preferred, and priority was given to the most recent data.

Patterns of drinking in the WHO regions

This report discusses patterns of drinking in the six WHO regions: the African Region (AFRO), the Region of the Americas (AMRO), the Eastern Mediterranean Region (EMRO), the European Region (EURO), the South-East Asian Region (SEARO), and the Western Pacific Region (WPRO). As Table

5 illustrates, the range of adult per capita alcohol consumption is quite broad across countries in each region, while the median adult per capita alcohol consumption rate is only slightly more informative. It is necessary to examine more closely the prevalence and patterns of drinking to gain a clearer sense of actual drinking behaviour.

Table 5. Median and range of recorded per capita consumption of alcohol per adult 15 years of age and over, and geographic coverage of survey data by WHO region

REGION	CONSUMPTION (LITRES)	RANGE	MEDIAN	COUNTRIES WITH SURVEY DATA/ TOTAL NUMBER OF COUNTRIES	PER CENT OF POPULATION COVERED
AFRO	1.37	0.02 - 7.72	0.95	7/46	34
AMRO	6.98	1.66 - 14.03	5.74	19/36	95
EMRO	0.30	0.05 - 10.00	0.53	2/22	19
EURO	8.6	0.85 - 15.12	8.26	22/52	45
SEARO	1.15	0.004 - 8.64	0.99	2/10	67
WPRO	5.54	0.34 - 18.39	1.95	9/28	93

African Region

Available data on drinking in the African region comes mostly from sub-Saharan and anglophone Africa. Because of the paucity of data, criteria for inclusion were expanded, and studies will be discussed describing drinking patterns in 12 countries. A pattern of greater drinking among males than females is evident across the region, except among the younger drinkers of some countries. A study in Cameroon found that formally uneducated males were the most likely to drink heavily (Yguel et al., 1990), and several Nigerian studies reported higher lifetime use of alcohol among men, as well as greater signs of alcohol dependence among male drinkers (Adelekan et al., 1993; Obot, 1993; Abiodun, 1996). Male drinkers in Seychelles drink nearly eight times as much alcohol as females who drink (Pinn & Bovet, 1991). Among South Africa's Black African majority, more than twice the number of men drink regularly than women (Roche-Silva, 1990). Male Tanzanian villagers were more likely to drink, drink frequently (reporting six or more drinking occasions in the past



month), and recall consumption of twice as much alcohol on the most recent occasion as female drinkers (Rijken et al., 1998). Four times as many men as women in Zambia drink weekly, while 70 per cent of women reported never drinking as opposed to only 35 per cent of men (Haworth, n.d.). Studies among health care workers and patients in Zimbabwe found that in both groups, men were more likely than women to drink to intoxication (Butau, 1992; Chinyadza et al., 1993). The pattern of customarily drinking frequently, and to intoxication, appears in substantial percentages of drinkers throughout the African region. Of the 74 per cent of Zimbabwean industrial workers who report drinking, 66 per cent drink every weekend and 22 per cent drink daily (Moses, 1989). Another study of Zimbabwean hospital workers found that 93 per cent of male and 68 per cent of female current drinkers drank to intoxication every time they drank (Butau, 1992). In Lesotho, 33.3 per cent of male and 15.9 per cent of female drinkers reported spending the entire day drinking, while 29 per cent of

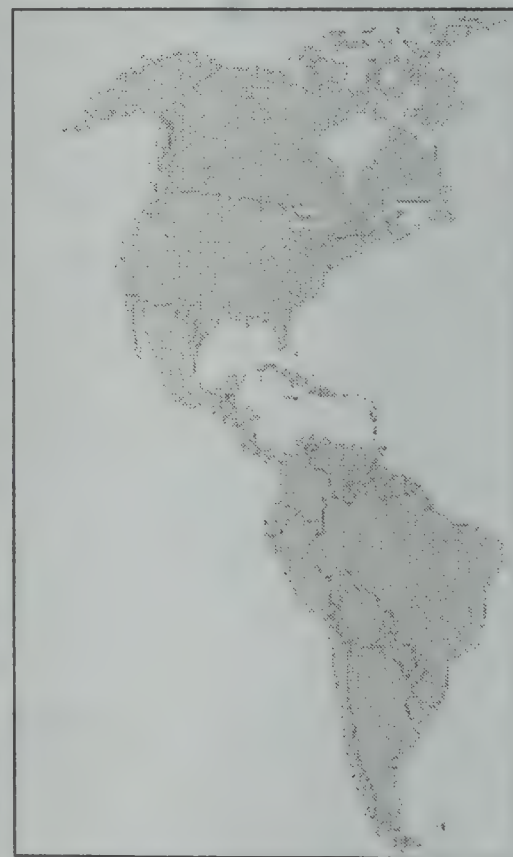
men and 23 per cent of women drank seven or more drinks on a typical drinking day (Lesotho Highlands Water Project, 1996a). Among heads of households (mostly male) in the Middlebelt region of Nigeria, 27.5 per cent of drinkers reported drinking two or more times a day, and 39.2 per cent of drinkers (20.8 per cent of the total sample) drank at least daily. Consumption of six bottles of beer or more at one sitting was not uncommon, while nearly three-quarters of the drinkers (20.8 per cent of the sample) drank at least three bottles of beer (1.7 litres, or approximately 67 grams of pure alcohol) in a typical drinking session (Obot, 1993). Nineteen per cent of males in Seychelles reported drinking more than 100 grams of alcohol per day (Pinn & Bovet, 1991). South Africa's most recent general population survey found that more than a quarter of Black African males were drinking more than 87 grams of pure alcohol a day (Parry & Bennetts, 1998). Traditional beverages such as sorghum-based beer and palm wine are most popular among older drinkers, while younger drinkers and those with a more European or American cultural orientation are more likely to prefer malt and barley-based beers. Studies in Nigeria and Zimbabwe found that those in higher income generating occupational groups, and those who are more European or Americanized in cultural orientation, are more likely to drink heavily.¹ (Abiodun, 1996; Eide & Acuda, 1996). Half of a sample of secondary students in Lesotho between the ages of 11 and 22 years believed that moderate drinking was impossible and that the fun of drinking was to get drunk (Meursing & Morojele, 1989).

In Namibia, an estimated 20 per cent of schoolchildren and 75 per cent of young people not in school abuse alcohol on weekends (Parry, 1997). In some areas, drinking begins at a very young age. In Zimbabwe, 31.1 per cent of those aged 14 years and under reported using alcohol, while in Lesotho 8.8 per cent of children aged between 10 to 14 years and 4 per cent of those aged between 5 to 9 years currently use alcohol (Acuda & Eide, 1994; Lesotho Highlands Water Project, 1996b).

Region of the Americas

Patterns of drinking in the Americas differ greatly between the two northern developed nations (Canada and the United States) and the developing states of Central and South America. Unlike other developed countries, the United States of America (US) has a relatively high rate of abstention. In the most recent household survey, 51 per cent had used alcohol in the past month, about 15.5 per cent engaged in frequent heavy drinking (five or more drinks on at least one occasion in the past month), and about 5.4 per cent were heavy drinkers (drinking five or more drinks per occasion on five or more days in that past 30 days) (US Department of Health and Human Services, 1995). Men are more than six times as likely to engage in heavy drinking as women. Hazardous drinking, defined as five or more drinks on one occasion, accounted for more than 53 per cent of all drinking in the US, and the heaviest drinking 10 per cent of adults, averaging two to four drinks per day, accounted for 60 per cent of total alcohol consumption (Greenfield, 1995).

Young people and young adults drink more heavily than the rest of the US population. Young adults between the ages of 18 and 25 years are the group most likely to engage in hazardous drinking, defined as five or more drinks at one sitting (US Department of Health and Human Services, 1995). In 1995, 55 per cent of 8th graders (13 to 14-year-olds), 71 per cent of 10th graders (15 to 16-year-olds), 81 per cent of 12th graders (17 to 18-year-olds) and 90 per cent of college students had tried alcohol. Among high school seniors, 51.3 per cent used alcohol in the past month (55.7 per cent for males and 47.0 per cent for females), and 3.5 per cent drank daily (5.5 per cent for males and 1.6 per cent for females) (US Department of Health and Human Services, 1996). In 1997, 31 per cent of 12th graders and 25 per cent of 10th graders reported hazardous drinking within the past two weeks (University of



¹ The use of the terms "heavy", "heavily", "binge", and so forth, to describe drinking patterns, are defined differently in different studies. In this report, wherever a definition of these terms was included in the study being cited, that definition is included in the text of the report.

Michigan News and Information Service, 1997). Adult prevalence of alcohol use in Canada has fallen since the 1970's, with 72.3 per cent of the 1994 national survey reporting alcohol use in the past year. This is in contrast to 80.4 per cent in 1978/79. Men, young adults (aged 20 to 24 years), and those with higher incomes, post-secondary education and current employment are more likely to drink (McKenzie, Williams & Single, 1997). Among students, 58.8 per cent reported using alcohol in the past year, with the highest levels of use in the 18 and above age group (78.2 per cent) and the lowest use among those aged 13 years and under (31.1 per cent). Young males are only slightly more likely to drink than young females (Adlaf et al., 1995). In the Central and South American countries, differences between male and female drinking are in general more marked, and annual prevalence of drinking is in general lower, ranging from 32 per cent in Jamaica to a high of 82.9 per cent in Peru (Jutkovitz & Hongsook, 1994; Ortega, 1993). While male and female drinking prevalence is somewhat closer in primarily wine-drinking Chile, in Mexico, where beer and spirits are much more popular, twice as many men drink alcohol as women (Navarro, 1997; Medina-Mora, 1997).

Table 6. Annual (*Lifetime) adult prevalence of drinking in selected countries in the Region of the Americas

COUNTRY	MALE (%)	FEMALE (%)	TOTAL (%)
Argentina (Matos et al., 1996)	-	-	66.7
Belize* (Pride Belize Survey Project Team, 1993)	-	-	61.0
Bolivia (Del Castillo & Salinas, n.d.)	76.2	60.4	66.9
Canada (McKenzie et al., 1997)	78.1	66.7	72.3
Chile (Sistema Nacional de Informacion Sobre Drogas, 1996)	68.7	53.6	60.0
Colombia (Ospina, 1997)	-	-	59.8
Costa Rica (Bejarano & Alvarado, 1997)	-	-	40.3
Dominican Republic (Jutkovitz et al., 1992a)	64.8	46.0	55.0
Ecuador* (Jutkovitz & Hongsook, 1994)	-	-	75.7
Guatemala* (Development Associates Inc., 1990)	65.9	48.3	56.7
Haiti* (Development Associates Inc., 1991)	60.3	56.4	57.8
Jamaica (Jutkovitz & Hongsook, 1994)	45.0	20.0	32.0
Mexico (Medina-Mora, 1997)	73	37	54
Panama (Jutkovitz et al., 1992b)	72.1	37.9	54.2
Paraguay* (Miguez & Pecci, 1997)	88	75	79.5
Peru (Ortega, 1993)			82.9
United States of America (US Department of Health and Human Services, 1996)	70	60.2	64.9
Venezuela (Conseil Nacional de Drogas, 1997)	-	-	62.9

Table 7. Prevalence of heavy drinking in selected countries in the Region of the Americas

COUNTRY	TOTAL (%)	MALE (%)	FEMALE (%)	DEFINITION
Brazil (Morcira et al., 1996)	15.5	-	-	>30g/day
Costa Rica (Bejarano et al., 1996)	9.7	-	-	men: >78.5g/day; women: >47 g/day
Mexico (Medina-Mora, et al., 1990)		31.1	5.0	>=5 drinks at least once/week
Mexico (Secretaria de Salud, 1995)	23.0	-	-	>=5 drinks on an occasion
Paraguay (Miguez & Pecci, 1997)	35.6	-	-	>78.5 g/occasion
United States of America (US Department of Health and Human Services, 1996)	5.4	9.3	1.9	>=5 drinks on 5+ occasions in past month
United States of America (US Department of Health and Human Services, 1996)	15.5	22.8	8.7	>=5 drinks at least once in past month

The little available data on heavy drinking shows an even greater difference between male and female patterns of drinking. Mexican men are six times as likely as women to drink at least five drinks at least once per week (Medina-Mora et al., 1990). The legacy of fiesta drinking is evident in

Mexican drinking patterns, and may be prevalent in other Latin American countries as well. The result of this concentration of heavy drinking among a relatively small group of men is that a quarter of Mexico's drinkers account for 78 per cent of the country's alcohol consumption (Medina-Mora, 1997). Although Mexico's recorded adult per capita consumption of alcohol is only a fairly moderate 5.04 litres (ranking only 65th of the 151 countries shown in Table 2), this group of heavy drinkers consumes alcohol at the rate of 17.6 litres of pure alcohol per person per year. This high rate of annual alcohol consumption combined with the fact that 23 per cent of Mexico's population drinks at least five drinks per occasion puts Mexico at risk of losses from both long-term chronic alcohol problems such as liver disease and cirrhosis and short-term acute alcohol problems such as motor vehicle injuries (Secretaria de Salud, 1995).

There are not many studies available regarding drinking among young people in the Region of the Americas, and those that are available are largely not comparable, since they look at a variety of different age groups. In some countries, drinking is initiated at a fairly young age. For instance, in the Dominican Republic 43 per cent of 12 to 14-year-olds reported having tried alcohol (Jutkovitz et al., 1992a). The percentage of drinkers increases with age, and in most countries, more than two-thirds of young people report current drinking by the time of completion of secondary school. There are some indications that drinking among younger people is rising. In Brazil, surveys of secondary school students in ten state capitals in 1987, 1989 and 1993 found a significant increase in youth drinking in seven of the ten cities, and among young females in eight of those ten (Cotrim, 1997). In Haiti, 19 to 24-year-olds have the highest prevalence of drinking, although those aged 35 to 39 years approach similar levels (Development Associates, 1991). In Chile, regular consumption of alcohol among young people rose from 11.5 per cent in 1984 to 18 per cent in 1990 (Urzua, 1993). In contrast, in the United States, the percentage of high school seniors who drink at least monthly has fallen from 72 per cent in 1980 to 51 per cent in 1993 (US Department of Health and Human Services, 1996).

Eastern Mediterranean Region

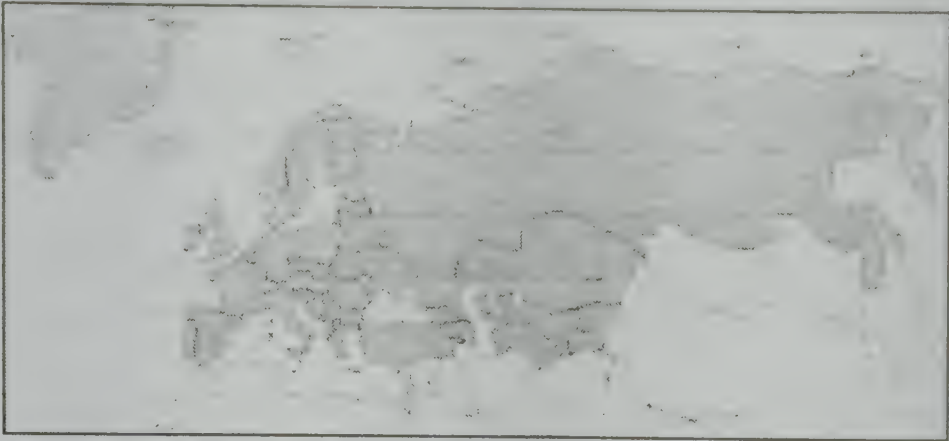
There is very little information on drinking prevalence in the Eastern Mediterranean Region. The strong influence of Islam throughout much of the region leads to quite low alcohol use in most countries. Areas with substantial Christian populations, such as Lebanon, are an exception. There are pockets of heavy drinking among minority peoples such as the Bari in Southern Sudan (Huby, 1994). Lebanon has substantial recorded alcohol consumption, but WHO was unable to find any studies of drinking patterns in this country. United Arab Emirates, Oman and Qatar also show substantial recorded alcohol



consumption, but it is likely in both cases that the bulk of the drinking occurs among guest workers rather than the permanently resident population. A 1990 study of medical students in Morocco found that 23 per cent were current drinkers (Touhami & Bouktib, 1990), and there are reports that European or American influences are contributing to a rise in drinking among young males in the Sudan (Nadim & Rahim, 1984).

European Region

The WHO European Regional Office (WHO/EURO) has aggressively promoted monitoring of alcohol use and problems among WHO Member States. In 1995, it produced profiles of alcohol use, problems and policies in 44 countries (Harkin, 1995). Some of the data collected for these profiles later appeared in the publication *Smoking, Drinking and Drugs- the European*



Region (WHO Regional Office for Europe, 1997). Data on drinking patterns among young people in 26 European countries were published in 1997 as part of the European School Survey Project on Alcohol and Other Drugs (ESPAD, 1997) (Hibell et al., 1997). In general, with the exception of the far eastern part of the region (e.g. the Islam-influenced republics of the former Soviet Union), countries in the European region have the highest adult prevalence of drinking in the world. In part, this is due to the fact that, for most European countries, the difference between male and female consumption patterns is small relative to other parts of the world. Table 8 below provides adult prevalence figures for selected European countries. The discontinuity between annual prevalence of drinking and adult per capita consumption arises because while two countries may have similar proportions of the total population drinking, their patterns of drinking, both in terms of how quantity and frequency of drinking is distributed in the population, can vary considerably. Such factors play an important role in determining how much alcohol is consumed in a country overall, and in shaping the nature of alcohol problems in that country.

Table 8. Annual prevalence of drinking in selected European countries

COUNTRY	MALE (%)	FEMALE (%)
Estonia (Narusk 1991)	97.0	86.0
Finland (Simpura, Paakkanen & Mustonen, 1995)	90.0	82.0
Greece (Madianou et al., 1987)	93.4	77.8
Hungary (Buda, 1987)	93.4	78.6
Netherlands (Inge et al., 1997)	88.4	76.3
Norway (Harkin et al, 1997)	89.9	80.3
Poland (Harkin et al., 1997)	93.8	84.1
Portugal	85.2	66.8
Spain (Gili Miner & Gini Ubago, 1987)	90.0	80.0
Sweden (Hurst, Gregory & Gussman, 1997)	90.0	75.0
Switzerland (ISPA, 1993)	90.0	77.0

To examine drinking within the population, a number of European countries have surveyed their populations to identify the prevalence of heavy drinking. Such surveys generally measure how much and/or how often people drink. There is little uniformity in the definition of heavy drinking. Table 9 below provides data from the countries that have measured drinking quantities. Even with a wide range of definitions, the data clearly show that men are far more likely (between 3 and 16 times as likely as women) to consume large quantities of alcohol on a regular basis.

Table 9. Heavy drinking by quantity in selected European countries

COUNTRY	MALE (%)	FEMALE (%)	TOTAL (%)	DEFINITION
Austria (Uhl & Springer, 1994)	28.8	4.3	16.2	>60 g/day
Czech Republic (Ferrer et al., 1995)	28.0	8.0	-	Men: >=50g/day; women: >=20g/day
Denmark (Harkin et al, 1997)	-	-	5.0	>60g/day
France (Harkin et al,1997)	15.9	1.0	-	>50g/day
Germany (former East) (Harkin, 1995)	-	-	8.0	>280g/week
Germany (former West) (Harkin, 1995)	-	-	14.0	>280g/week
Iceland (Pálsson 1995)	8.1	1.6	-	5+ litres pure alcohol in past six months
Ireland (O'Connor & Daly, 1983)	11.0	1.0	-	Men: >500g/week; women: >350g/week
Netherlands (Inge et al., 1997)	14.2	2.6	8.2	6+ drinks on 9+ days or 4-5 drinks on 21+ days per month.
Poland (Sieroslawski & Moskalewicz, 1994)	23.7	3.6	-	Men: >150g/week; women: >115g/week
Spain (Robledo de Dios, 1996)	-	-	4.0	>415g/week
Switzerland (Harkin et al, 1997)	9.2	1.6	-	>=60g/day
United Kingdom (UK Department of Health, 1992)	6.0	2.0	-	Men: >400g/week; women: >280g/week

Table 10 shows the countries where data are available on heavy drinking defined by frequency as opposed to quantity. While gender of drinkers is not given in these studies, the data show how divergent drinking patterns are in the European region. In some countries, such as Italy, the majority of the population drink at least three times per week. Elsewhere, such as in Ireland, frequent drinking is much less prevalent, but 11 per cent of men drink more than 500 grams of pure alcohol per week. This suggests a pattern of very heavy alcohol consumption on less than three occasions per week, and points out the relationship between patterns of drinking alcohol, per capita alcohol consumption, and the prevalence of health and social problems. A substantial portion of the population drinking very heavily on occasion but not frequently, such as in Ireland, puts the nation at high risk of health damage from acute effects of alcohol consumption such as injuries and motor vehicles crashes. In Spain, on the other hand, where close to a third of the drinkers consume alcohol at least three times per week, only four per cent drink more than 415 grams per week. This implies that Spain will be at higher risk of long term, as opposed to acute, effects of heavier alcohol consumption.

Table 10. Frequent drinkers in selected European countries

COUNTRY	FREQUENT DRINKERS (%)	DEFINITION
Belgium	19	3 or 4 days/week
Denmark	16	3 or 4 days/week
Ireland	5	3 or 4 days/week
Israel	2	Daily for the past year
Italy	53	3 or 4 days/week
Luxembourg	20	3 or 4 days/week
Netherlands	20	3 or 4 days/week
Spain	32	3 or 4 days/week
United Kingdom	16	3 or 4 days/week

Sources: Commission of the European Community (Europeans Against Cancer Programme), 1990; Gleser, 1994.

Many European nations monitor alcohol consumption levels among the young because alcohol problems have historically taken a high toll on young people. The Health Behaviour in Schoolchildren study, supported by the WHO Regional Office for Europe, included questions about alcohol use in its survey of 15-year-olds in 13 countries in 1993 and 1994. As Table 11 shows, with the exception of Israel, most young people in these countries have tried alcohol. National differences show up in frequency of drinking and intoxication.

Table 11. Drinking among schoolchildren, aged 15 years, in selected European countries, 1993-1994

COUNTRY	LIFETIME		WEEKLY		DRUNK AT LEAST TWICE	
	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
Austria	96.2	94.6	40.2	24.9	45.6	30.4
Denmark	94.9	95.6	40.1	33.4	64.7	66.7
Estonia	92.5	91.9	13.2	3.3	25.8	9.6
Finland	92.0	92.3	12.9	5.0	52.0	51.1
France	88.9	89.9	38.0	17.5	23.8	12.9
Greece	83.1	87.1	8.3	7.5	46.3	46.4
Hungary	93.3	93.6	22.8	13.4	35.5	19.7
Israel	68.2	52.6	22.8	10.4	8.1	5.6
Latvia	93.2	93.1	16.1	3.2	-	-
Lithuania	95.3	95.1	13.8	5.7	27.3	16.5
Poland	89.5	87.8	22.0	9.2	33.5	18.0
Russian Federation (St. Petersburg)	80.0	83.5	17.3	6.2	20.8	12.3
Slovakia	95.4	93.0	33.0	10.3	46.3	20.2

Source: World Health Organization Regional Office for Europe. Health Behaviour in School Children Study 1993/1994. Data supplied by Dr. Bente Wold, WHO Collaborating Centre, University of Bergen, Norway.

In most of the wealthier nations of Western Europe, both weekly drinking and intoxication are much more common, excluding France where young people drink and become intoxicated less frequently. However, in Western Europe as elsewhere, the strong differences between male and female drinking patterns remain in place, with the exception of Denmark, where nearly two-thirds of all schoolchildren have been intoxicated at least twice, and where girls drink almost as frequently and are slightly more likely than boys to have drunk to intoxication. Experimentation with alcohol is just as common among young people in the Central and Eastern European countries reported on here, but both weekly drinking and drinking to intoxication tend to be less common.

The European School Survey Project on Alcohol and Other Drugs (ESPAD) used a standardized data collection instrument and consistent survey methodologies in a larger group of countries in the spring of 1995, in an effort to produce comparable results. The study produced standardized data in 25 European countries. As Table 12 below shows, the results are similar to those found earlier by WHO. With the exception of Turkey, more than three-quarters of the young people surveyed have tried alcohol. Drinking and drinking to intoxication tends to be more common among boys, although there are exceptions. However, the tendency among males of any age to drink more heavily than females shows up in the statistics on the percentage of young people who have been drunk in the past thirty days: in this case, only male young men in Finland, Iceland, Norway and Sweden are less likely to have been drunk in the past 30 days than their female peers.

Table 12. Alcohol use among 15 to 16-year-olds in selected European countries, 1995

Country	LIFETIME PREVALENCE			30-DAY PREVALENCE			DRUNK IN PAST 30 DAYS		
	M (%)	F (%)	Total (%)	M (%)	F (%)	Total (%)	M (%)	F (%)	Total (%)
Croatia	85	79	82	48	27	39	20	6	13
Cyprus	92	88	90	79	60	69	12	8	10
Czech Republic	97	97	97	68	66	67	35	26	31
Denmark	97	95	96	82	81	81	58	58	58
Estonia	94	93	93	51	50	51	27	15	20
Faroe Islands	79	80	79	47	43	45	35	33	34
Finland	88	89	89	55	61	58	49	54	51
Hungary	92	91	91	52	44	48	26	15	20
Iceland	78	80	79	55	56	56	44	48	46
Ireland	91	91	91	69	69	69	43	41	42
Italy	89	86	88	73	55	66	22	12	19
Lithuania	94	95	95	57	62	59	38	31	35
Malta	92	92	92	69	63	66	17	11	14
Norway	79	80	79	41	45	43	29	32	30
Poland	93	90	92	60	48	54	31	17	23
Portugal	80	78	79	54	45	49	13	10	11
Slovak Republic	96	94	96	55	49	53	25	13	19
Slovenia	88	86	87	49	44	46	25	18	21
Sweden	89	89	89	55	56	55	39	43	41
Turkey (Istanbul)	62	60	61	32	23	28	14	7	11
Ukraine	86	88	87	52	57	55	16	11	13
United Kingdom	94	94	94	74	73	74	48	48	48
Latvia	93	94	93	53	60	57	25	17	20
France	76	80	78	-	-	-	-	-	-
Greece	96	95	95	79	69	74	16	15	16

Source: Hibell et al., 1997

South-East Asian Region

Few general population surveys measuring alcohol consumption have been conducted in the countries of the South-East Asian Region. In the region's largest country, India, national survey data were not available. India is regionally extremely diverse, and extrapolation from regional data must be carried out with care. Nonetheless, regional surveys in both the Southern and the Northern regions of the country have found very low rates of alcohol use among women, while the rates of current alcohol use among men range from 34.8 to 58.3 per cent (Mohan et al., 1992, Sundaram et al., 1984; Singh, 1984). Although as many as 10 per cent of the population has been estimated to drink heavily, the only survey research to measure this found that in the Southern Indian state of Kerala, 34.8 per cent of men drink more than 60 grams of alcohol per week (a relatively low measure of "heavy drinking" by international standards²) (Beegom et al., 1995). Among young people, use



² See WHO, in press, for further discussion of recommended definitions for measures of quantities of drinking.

appears to increase with age and educational level. Studies in the late 1970s and early 1980s found that 12.7 per cent of high school students, 32.6 per cent of university students, between 40 and 60 per cent of medical students, and 31.6 of non-student young people used alcohol (Saxena, 1997). Several Indian states have recently experimented with prohibition of alcohol, while the federal government has taken steps to loosen controls over alcohol production and trade. With all these changes in policies regarding alcohol availability, it is likely that prevalence of drinking will change as well, although there is no recent research available to suggest the direction of those changes.

Elsewhere in the region, religion is a strong predictor of alcohol use. In predominantly Muslim Indonesia, an estimated 2.7 per cent of the population drink alcohol regularly (Boedhi-Dermojo et al., 1990). In Maldives, also a Muslim nation, alcohol use is prohibited, and there are no data available on prevalence; however, tourist and guest worker alcohol consumption combined with a relatively small resident adult population accounts for the country's per capita alcohol consumption rate of just over 2 litres of pure alcohol per adult. Caste or ethnic grouping may also predict alcohol use. In Nepal, those designated *Matwali* may drink alcoholic beverages by virtue of their birth. There are reports that the number of people in this category is rising (Shrestha, 1992). Alcohol use is considered an integral part of most social occasions among many ethnic groups, and drunkenness among men is frequent and tolerated, whereas female drunkenness is not. In Bhuta, alcohol is integrated into cultural and religious ceremonies. However, there is no information available on the extent of alcohol use among the population. In Thailand, a predominantly Buddhist country, a 1991 national survey found that 31.4 per cent of all adults consumed alcohol, while a 1996 survey estimated that daily drinkers comprised 2.2 per cent of the population (Saxena, 1997; Ministry of Health Thailand, 1997).

Several surveys have been conducted in various districts of Sri Lanka. Lifetime prevalence of alcohol use ranges from 25 to 34 per cent of adults, and current use from 20 to 32 per cent. Less than four per cent of women drink (Alcohol and Drug Information Centre, 1993). Alcohol use tends to be higher in poorer families. In rural areas, those who drink tend to do so heavily (Hettige, 1991; Gunasekera & Perera, 1997). In one survey, 35 per cent of drinkers had experienced inability to control their alcohol use (Hettige, 1991). Among young people between the ages of 12 and 20 years, life time use ranges among the districts from 19 to 29 per cent, while current use varies from 3.9 to 17.2 per cent. Most young drinkers are male, and more than a quarter had begun drinking by the age of 11 years (Alcohol and Drug Information Centre, 1993).

Western Pacific Region

Data on prevalence of drinking alcohol among adults or young people exist for 11 of the 28 countries in the region. Table 13 below shows survey-based prevalence of adult drinking estimates for the countries for which data are available. In New Zealand and Australia, where populations of European origin dominate, differences between male and female drinking prevalences are slight; in contrast, men in China, Fiji, Japan, Korea, on the island of Weene in the Federated States of Micronesia and in urban Papua New Guinea are far more likely to use alcohol. Singapore reports very low prevalence of drinking, with only 13.2 per cent of Chinese, 1.1 per cent of Malays and 20.9 per cent of Indians using alcohol at least once a week (Hughes et al., 1990). In neighbouring Malaysia, there are no general population surveys available. Studies of persons attending medical facilities, which are likely to overstate drinking in the general population, have found that between 52 and 70 per cent of Malaysians of Chinese origin, between 38 and 42 per cent of



Malaysians of Indian origin, and between 11 and 24 per cent of Malaysians of Malay origin are drinkers (Indran, 1993; Maniam, 1994).

Table 13. Adult drinking prevalence in selected countries of the Western Pacific Region

COUNTRY	PREVALENCE	MALE (%)	FEMALE (%)	TOTAL (%)
Australia (Drugs of Dependence Branch [Australia], 1996)	Annual	80.0	72.0	76.0
China (Hao & Young, 1997)	Annual	87.3	31.5	61.1
Fiji (National Food and Nutrition Committee [Fiji], 1995)	Weekly	25.7	2.5	13.7
Japan (Yamamuro, 1993)	Annual	85.0	53.0	69.0
Micronesia (Chuuk) (Marshall, 1987)	Lifetime	85.5	2.3	45.2
New Zealand (Wyllie, Millard & Zhang, 1996)	Annual	89.0	85.0	-
Palau (Ueda, 1998)	Annual	53.0	-	40.0
Papua New Guinea (urban) (Marshall, 1997)	Lifetime	78.0	13.5	-
Republic of Korea (Ministry of Health and Welfare [Republic of Korea], 1998)	Monthly	83.0	44.6	63.1

In Australia and New Zealand, overall rates of drinking are, in the main, stable or falling while in Japan, during the 1980s, the percentage of men drinking grew by 15 per cent, and the percentage of women drinkers nearly tripled (Drugs of Dependence Branch, Australia, 1996; Wyllie, Millard & Zhang, 1996; Yamamuro, 1993). Heavy drinkers generally account for the largest share of alcohol consumption: in New Zealand, for example, the predominantly male (83 per cent) heaviest drinking 10 per cent of drinkers consumed almost half the total alcohol sold (Wyllie, Millard & Zhang, 1996). Heavy drinking is also common among men in some of the Pacific islands. Half of all current drinkers in the community of the island of Weene (formerly Moen) in the state of Chuuk in the Federated States of Micronesia reported consuming 10 or more drinks per session, while more than 60 per cent took seven or more drinks per session (Marshall, 1987). Men in Papua New Guinea typically drink in groups of other men, beginning in their mid to late teens. The goal is usually to get drunk, and consumption of 12 or more bottles of beer at a sitting is typical (Marshall, 1997).

Table 14. Youth drinking prevalence in selected countries in the Western Pacific Region

COUNTRY	PREVALENCE	MALE (%)	FEMALE (%)	TOTAL (%)	AGE
Australia (Hill et al., 1993)	Weekly	51.0	46.0	-	17 years
Japan (Suzuki et al., 1991)	Lifetime	76	83.0	-	2nd year high school
Malaysia (Hoo & Navaratnam, 1988)	Annual	-	-	11.3	13 to 15 years
New Zealand (Fergusson, Lynskey & Horwood, 1994)	Annual	-	-	71.6	15 years
Papua New Guinea (Marshall, 1997)	Lifetime	39.0	14.0	-	Average age of 16 years
Philippines (Mendoza & Ponce, 1991)	Annual	18.6	18.6	18.6	13 to 16 years
Republic of Korea (Ministry of Health and Welfare [Republic of Korea], 1998)	Monthly	-	-	26.9	High school students

In the developed countries of the region, large proportions of young people are drinking. In Australia and New Zealand, those under 25 years of age are most likely to be the heaviest drinkers (Drugs of Dependence Branch, Australia, 1996; Wyllie, Millard & Zhang, 1996). Studies show that Australian males aged 20 to 24 years drink 70 grams or more on a typical drinking day. Fifty per cent of Australian boys and 46 per cent of girls drink weekly, with the boys averaging 70 grams of pure alcohol per week, and the girls averaging 45 grams weekly (Hill et al., 1993). In New Zealand, more than half of a sample of 15-year-olds in Christchurch said that a typical drinking session involved consuming at least 30 grams of pure alcohol (Fergusson, Lynskey & Horwood, 1994). A national sample of teenagers aged 14 to 18 years found that 28 per cent reported drinking 40 grams or more

(defined as binge drinking) in the past fortnight, while 34 per cent reported doing so the last time they drank (Boyd, 1998). A national survey in 1993 in Japan found that more than 80 per cent of school children between the ages of 13 and 17 years were drinking, and that 55 per cent of them had done so to intoxication or unconsciousness (Brazeau & Burr, 1993). Where statistics are available, it can be seen that smaller proportions of young people drink in the developing countries. In the Republic of Korea youth prevalence of drinking has been increasing steadily in recent years (Ministry of Health and Welfare, Republic of Korea, 1998).

Alcohol industry

Tables 15 and 16 show the global dispersion of alcohol production and trade in 1996. Table 15 shows that several of the leading alcohol-producing countries are located in the developing world, notably China which produced more beer than any other country. The vast majority of that production is consumed in domestic markets, and, therefore, alcohol contributes little to developing country export earnings. Only approximately 10 per cent of alcoholic beverage production goes into international trade (based on FAO data, 1998). The bulk of trade occurs between the developed countries, and both on the import and export side, a few countries tend to dominate the trade. For instance, the ten countries exporting the most spirits, beer and wine account for 70, 75 and 84 per cent of global exports of these products, respectively.

Table 15. Leading alcohol producing countries, 1996

BEER		SPIRITS		WINE	
Country	Production (Metric Tons)	Country	Production (Metric Tons)	Country	Production (Metric Tons)
USA	23 700 000	China	9 975 400	France	5 965 000
China	17 207 270	India	1 474 793	Italy	5 877 181
Germany	10 780 000	Republic of Korea	1 400 240	Spain	2 987 040
Japan	6 804 500	USA	1 100 000	USA	1 887 700
Brazil	6 500 000	United Kingdom	921 500	Argentina	1 268 100
United Kingdom	5 800 500	Japan	850 800	Portugal	952 877
Mexico	4 721 140	Thailand	804 120	South Africa	940 000
Spain	2 500 000	Russian Federation	716 300	Germany	864 199
Netherlands	2 335 200	Brazil	670 000	Australia	673 445
Canada	2 326 000	Philippines	560 000	Romania	580 000

Source: FAO Statistical Databases 1998

Table 16. Leading importers and exporters of alcohol, 1996

SPIRITS (METRIC TONS)			
Country	Exports	Country	Imports
United Kingdom	651 151	United States of America	381 324
France	377 779	Germany	166 102
Germany	190 903	Spain	148 702
Netherlands	126 981	France	143 662
Ukraine	126 000	Japan	133 259
Italy	116 382	United Kingdom	92 793
United States of America	109 617	Ukraine	79 000
Hungary	97 451	Belarus	67 460
Mexico	80 601	Italy	58 454
Ireland	79 962	Netherlands	47 902

Table 16. Continued

BEER (METRIC TONS)			
Country	Exports	Country	Imports
Netherlands	1 197 482	United States of America	1 457 985
Germany	837 871	United Kingdom	541 961
United States of America	598 715	France	430 190
Mexico	491 648	Italy	306 913
Luxembourg	431 992	Germany	302 070
Canada	361 416	Hong Kong*	208 782
Ireland	325 229	Brazil	189 876
Denmark	283 497	Japan	186 655
United Kingdom	234 553	Spain	186 212
Czech Republic	212 136	China	168 196
WINE (METRIC TONS)			
Country	Exports	Country	Imports
Italy	1 459 120	Germany	1 123 460
France	1 308 695	United Kingdom	740 223
Spain	720 214	France	528 887
Germany	262 646	United States of America	355 437
Australia	234 270	Russian Federation	250 221
Chile	203 432	Luxembourg	243 726
Portugal	195 114	Netherlands	217 110
Bulgaria	183 470	Switzerland	185 439
United States of America	164 905	Canada	173 213
Republic of Moldova	162 679	Denmark	152 273

*China, Hong Kong SAR.

Source: FAO Statistical Databases 1998

An analysis of the value of international trade in alcohol shows even more clearly the dominance of developed nations. Table 17 shows that the four leading alcoholic beverage importing countries, the USA, the UK, Germany and Japan, account for nearly half of the US dollars spent on alcoholic beverage imports (based on data from 48 countries). However, this does not mean that the alcohol trade is insignificant in developing economies. When ranked by how large a percentage of total import costs are paid for alcoholic beverages, as in Table 18, of the 39 countries for which data were available, developing economies and economies in transition, such as the Russian Federation, dominate.

Table 17. Leading alcoholic beverage-importing countries in 1995, ranked by costs of imports

COUNTRY	IMPORTS (US\$ 000)	PER CENT OF TOTAL IMPORT COSTS
United States of America	4 498 130	0.58
United Kingdom	2 860 506	1.08
Germany	2 612 925	0.58
Japan	1 955 886	0.58
Russian Federation	1 398 274	3.00
France	1 304 234	0.47
Spain	1 068 446	0.93
Belgium	1 038 076	-
Netherlands	839 867	0.48
Italy	716 888	0.35

Source: Department for Economic and Social Information and Policy Analysis Statistical Division. 1995 International Trade Statistics Yearbook Volume II: Trade by Commodity. (New York, United Nations 1996)

Table 18. Leading alcoholic beverage-importing countries in 1995, ranked by per cent of total import costs

COUNTRY	IMPORTS (US\$ 000)	PER CENT OF TOTAL IMPORT COSTS
Russian Federation	1 398 274	3.00
Guadeloupe	46 205	2.44
United Republic of Tanzania	38 902	2.32
Macau	41 530	2.06
Ukraine	166 346	1.55
Martinique	29 699	1.51
Reunion	34 801	1.32
United Kingdom	2 860 506	1.08
Denmark	413 560	0.96
Bahrain	34 464	0.95

Source: Department for Economic and Social Information and Policy Analysis Statistical Division. 1995 International Trade Statistics Yearbook Volume II: Trade by Commodity. (New York, United Nations 1996)

In contrast, export earnings are dominated by developed countries. Table 19 shows that ten developed countries earn the greatest amounts from alcoholic beverage exports accounting for nearly 80 per cent of all such earnings, based on the 49 countries from which data were available. Table 20 shows that when ranked by the percentage of total export earnings gained from alcoholic beverages, developing countries and economies in transition dominate the rankings, based on the 43 countries for which data were available.

Table 19. Leading alcoholic beverage-exporting countries in 1995, ranked by export earnings

COUNTRY	EXPORTS (US\$ 000)	PER CENT OF TOTAL EXPORT EARNINGS
France	7 193 629	2.51
United Kingdom	4 493 014	1.86
Italy	2 598 448	1.12
Germany	1 706 067	0.33
Netherlands	1 395 173	0.71
Spain	1 141 783	1.25
United States of America	1 083 713	0.19
Ireland	611 464	1.39
Belgium	582 962	-
Canada	562 308	0.29

Source: Department for Economic and Social Information and Policy Analysis Statistical Division. 1995 International Trade Statistics Yearbook Volume II: Trade by Commodity. (New York, United Nations 1996)

Table 20. Leading alcoholic beverage-exporting countries in 1995, ranked by percentage of total export earnings

COUNTRY	EXPORTS (US\$ 000)	PER CENT OF TOTAL EXPORT EARNINGS
Republic of Moldova	173 025	24.03
Martinique	24 216	10.81
Bulgaria	185 804	3.65
Cyprus	42 323	3.44
France	7 193 629	2.51
Portugal	548 208	2.41
United Kingdom	4 493 014	1.86
Ireland	611 464	1.39
Spain	1 141 783	1.25
Croatia	57 471	1.24

Source: Department for Economic and Social Information and Policy Analysis Statistical Division. 1995 International Trade Statistics Yearbook Volume II: Trade by Commodity. (New York, United Nations 1996)

These tables illustrate that in developing countries, and countries in transition, export earnings are relatively low in global terms, yet these earnings are an important part of the total income in these countries. Products and profits in the international alcohol trade flow primarily into the developed

countries and countries in transition. These flows are dictated and protected by the structure of the international alcohol industry.

As Tables 15 and 16 illustrate, there are three main alcohol industries worldwide: beer, spirits and wine. Although the global structure of each is unique, there are some common trends. The dominant trend in the global alcohol industry, as in most industries, has been away from labour-intensive products with little brand identity and decentralized production, and towards capital-intensive production of global brands heavily supported by marketing budgets. This has particularly been true of beer, which can be produced almost anywhere, less true of spirits, and least true of wine which has the most exacting geographic requirements for production (although wine is reportedly beginning to follow this trend as well (Barry, 1998). In each category, there is a plethora of local alcohol products, produced labour-intensively with relatively low levels of technology and sold with comparatively low prices. Higher profits have come from the creation of a small number of international brands whose production and marketing are far more capital-intensive, taking advantage of economies of scale in these areas.

Concentration of ownership is a general trend. The world's leading brewers, via licensing, joint ventures, contract brewing, mergers and acquisitions, now produce more than a third of the world's beer. Their share of the world's beer market has grown from 28 per cent in 1980 to 36 per cent in 1997 (Cavanagh & Clairmonte, 1985; Zweibach, 1998). Global spirits brands comprise 46 per cent of spirits sales worldwide, and ten companies account for more than half these sales (Impact Databank, 1995; Fleming, 1998). The companies producing these brands are for the most part located in developed nations, and rank among the world's largest transnational corporations. They rely on large marketing budgets to maintain market dominance, and gain oligopoly profits by doing so. The largest spirits company in the world spent US\$ 1.2 billion marketing its spirits brands in 1997 to earn profits of US\$ 1.8 billion (Fleming, 1998).

Low-technology and labour-intensive production of alcoholic beverages still dominates in many developing countries, particularly in Africa. It sometimes carries with it substantial health risks from products of highly variable quality, with little control exercised over hygiene in the production process or over substances added to the beverage to increase its intoxicating effects on the drinker. In many of the countries of Central and Eastern Europe, this end of the market has experienced a resurgence since the collapse of central market controls.

This mode of production creates particular challenges to health and development. The first challenge from a health perspective in these situations is to gain some degree of control over production and the market, the former so that product quality may be assured, and the latter so that control measures such as taxation may be employed to influence alcohol consumption patterns. From a development perspective, in parts of Africa, home or small-scale local production particularly of beer but also of local spirits products is an important source of income for women, especially those who are single heads of households (Colson & Scudder, 1988; Maula, 1997). Industrialization of the alcohol supply can eliminate this source of income, necessitating creation of other forms of employment and income if poverty among rural women and children is to be avoided.

In areas where industrialization has taken hold, issues of product quality and market control are of less importance. In addition to the economic advantages of more efficient means of production, in some cases cultural and macro-economic factors have contributed to the transition from small-scale to more complex industrial production of alcohol in the developing world. European or American-style marketing and patterns of status imitation have furthered the popularity of imported industrialized alcoholic beverages, which have then become candidates for import substitution. In practice, however, import substitution has brought fewer economic benefits than might have been anticipated. African countries in the 1980s, for instance, ended up importing many of the raw materials needed for brewing lager-style (European-style) beer, offsetting any gains from import substitution (Kortteinen, 1986). Also, the global brand owners in the beer and spirits categories have kept tight control over their products. Although they may not directly control production of their products, they are likely to dictate marketing approaches to promote a consistent product image worldwide. Sophisticated market research tools combined with the use of religious and cultural symbols, coupon and sweepstakes schemes, sexual innuendoes and health and strength claims, have been used to encourage consumption of the companies' products (Jernigan, 1997).

The ability and willingness of the global producers to spend heavily to maintain product image create high barriers to entry for other firms, whether local or international, wishing to move into the more profitable end of the market. This supports the dominance of the market by a few firms and a few products, accelerating the trend towards concentration in ownership of the alcohol supply worldwide. The health danger of this concentration lies in the economic and political influence that may accrue to the leading companies. This may give them the potential to block or temper efforts to control alcohol consumption and problems at the same time that they rely on huge marketing budgets to encourage consumption of their products.

The global alcohol-producing transnationals have spent decades honing their marketing expertise in developed country markets. Developed countries in many cases have well-developed public health and regulatory environments to temper the health effects of this marketing. In at least some developing country markets, the international marketers use campaigns and tactics that would be unacceptable in their home markets, selling alcohol as a tonic for new mothers or as a product that will make drinkers stronger and healthier (Jernigan, 1997). Developing a policy infrastructure able to monitor and regulate alcohol markets is an important modern public health challenge.

Health effects¹

Alcohol use is related to a wide range of physical, mental and social harms. Most health professionals now agree that practically no organ in the body is immune from alcohol related harm (Bower, 1992). In any country where there is heavy alcohol use, whether on occasion or over extended periods, alcohol related problems can be expected. Some meta-analytic work has been attempted to estimate the degree to which various health and social problems are attributable to alcohol use. A number of conditions have been identified that by definition are caused by alcohol use, such as alcoholic psychosis, alcohol dependence syndrome, alcohol abuse, alcoholic polyneuropathy, alcoholic cardiomyopathy, alcoholic gastritis, alcoholic liver cirrhosis, and ethanol toxicity and methanol toxicity. Other conditions or events have also been identified where the fraction attributable to alcohol was in excess of 30 per cent, these included oesophageal varices, unspecified cirrhosis, chronic pancreatitis, road injuries, fall injuries, fire injuries, drowning, suicide and homicide (English et al., 1995).

Research over the past two decades has found that the level of alcohol problems is related both to the overall amount of drinking in the country (per capita alcohol consumption) and to the particular patterns of drinking (Edwards et al., 1994). Alcohol consumption is associated with higher death rates from injuries (CDC, 1995; Andreasson, Allebeck & Römelsjö, 1988); violence and suicide at least in some cultures (Andreasson, Allebeck & Römelsjö, 1988); poisoning (Anderson, 1995); haemorrhagic stroke (Donahue et al., 1986; Klatsky, 1989); and pancreatitis (Singh & Simsek, 1990); as well as cancers of the oral cavity, pharynx, larynx, oesophagus, liver (IARC, 1988), and breast (Smith-Warner et al., 1998). Studies have also found statistically significant associations between changes in per capita or aggregate consumption of alcohol and changes in liver cirrhosis and pancreatitis mortality (Skog, 1986; Norström, 1987). Research has also found a decrease in all-cause mortality among certain light-to-moderate drinkers of alcoholic beverages compared to non-drinkers or heavier drinkers (Stampfer et al., 1988; Blackwelder et al., 1980; Boffetta & Garfinkel, 1990; Camacho, Kaplan & Cohen, 1987; de Labry et al., 1992; Doll et al., 1994; Farchi et al., 1992; Friedman & Kimball, 1986; Fuchs et al., 1995; Gazanio et al., 1993; Gordon & Doyle, 1987; Klatsky, Armstrong & Friedman, 1990; Kono et al., 1986; Marmot and Brunner, 1991; Miller et al., 1990; Rimm et al., 1991; Salonen, Puska & Nissinen, 1983; Shaper, Wannamethee & Walker, 1988; Klatsky, Armstrong & Friedman, 1997; Thun et al., 1997). There are also recent studies that do not find this effect (Fillmore et al., 1998a; Leino et al., 1998; Fillmore et al., 1998b).

Protective effects

Where it has been found, the decrease in all-cause mortality – the so called “protective effect” - results primarily from a reduction in coronary heart disease (CHD), a leading cause of death among people in the latter half of life, particularly in the developed countries (Doll et al. 1994; Thun et al., 1997; Jackson, Scragg & Beaglehole, 1991). The level of alcohol consumption in studies that have found a reduction in all-cause mortality among light-to-moderate drinkers ranges from less than one drink a day to five, with one being the most frequently reported (Poikolainen, 1995). Evidence of a protective effect at low levels of alcohol consumption has also been found for ischemic stroke (Rodgers et al., 1993; Palomaki & Kaste, 1993; Bogousslavsky et al., 1990), cholelithiasis (gallstones) (Thornton, Heaton & Syme, 1986; English et al., 1995), and non-insulin dependent diabetes mellitus (Rimm et al.,

¹ This section benefits from reviews prepared by Dr. Harold Holder and Dr. Eric Single for the International Guidelines for Monitoring Alcohol Use and Problems project, and by Dr. Klaus Mäkelä for the Alcohol Policies in Developing Societies project.

1995; Kiechl et al., 1996). The impact of alcohol on all-cause mortality is affected by the prevalence of different diseases and injuries, the age structure of the population and the level of alcohol consumption at the societal level. There is a positive, largely linear relationship between reported alcohol consumption and total mortality in populations or groups with low CHD rates (which includes younger people everywhere). On the other hand, there is a J- or U-shaped relationship between reported usual alcohol consumption and total mortality in populations with high rates of CHD (WHO, 1995). While the findings of a protective effect for CHD have been widely publicized, the limits on their potential applicability should be clearly recognized. CHD is an important cause of death and disability in most developed societies, but not in many developing societies. Where CHD is important, it primarily affects men over age 45 and women past menopause, and any protective effect of drinking at younger ages is highly speculative. How much other protective factors may substitute for alcohol's protective effect has not been well studied.

Although some clinicians remain unconvinced of alcohol's protective effect either on total or on cardiovascular mortality (e.g. Wannamethee & Shaper, 1997; Whitaker & Ward, 1996; Deev et al., 1998), the predominant expert judgement at the time of writing is that, among populations at high risk of heart disease (primarily those who are middle-aged or older in societies with risky levels of smoking, animal fat in the diet, and sedentariness), drinking alcohol in amounts between 5 and 20 grams per day (i.e. an average of one-half to two drinks) has some protective effect. However, there are very few clinicians who would give this finding the status of a prescription to non-drinkers to begin drinking, because of the other risks associated with alcohol consumption.

Effects on others

In addition to the effects of alcohol on the drinker, there is considerable evidence of the effect of alcohol consumption on the health of people other than the drinker in areas such as motor vehicle crash injuries, violence involving aggravated assault, and spouse and child abuse. The public health impact of alcohol on others is of great importance in both developed and developing countries. As association between drinking and some forms of victimization, including robbery, rape and aggressive behaviour is consistently reported in the literature (Edwards et al., 1994). Particularly in developing countries, alcohol consumption may lead to significant effects on the health of the drinker's family, through financial difficulties arising when a large part of the family's income is spent on alcohol, aggravated by poor living conditions and malnutrition (Saxena, 1997).

Indicators of alcohol-related harm

Identifying meaningful indicators for monitoring alcohol-related harm requires understanding of the nature of causality in alcohol-related problems. For most alcohol problems, drinking is not the single cause, but part of a constellation of factors that lead to increased risk of harm, and eventually to harm itself. Alcohol use is one of the factors that increases risk of harm occurring, either to the drinker or to those around him or her. In the case of drinking-driving, for example, causal factors influencing both incidence and severity of injury may include road conditions, driver experience and eyesight, speed, the presence of safety features such as seatbelts or airbags. Similarly, liver cirrhosis may be caused by infectious agents (such as the hepatitis B and C viruses now epidemic among injection drug users in some countries), and incidence or progression may also be influenced by genetic predisposition. A substantial literature has developed reviewing the degree to which alcohol use may be considered a conditional cause in situations involving multiple causes. The question can be asked, would the disorder have occurred if the alcohol had not been present. For most potentially alcohol-related conditions, many cases also occur without alcohol involvement. Using techniques of meta-analysis to review and assess results from many studies, researchers have developed estimates of alcohol-attributable fractions for leading disorders. The studies on which the meta-analyses are based have been done on a tiny portion of the global spectrum of cultures. The real fraction of drowning attributable to alcohol, for instance, will vary from one society to another, depending on whether and, how much, people drink near or on water. The variation around intentional casualties – homicide and suicide – will be even greater. Even for non-casualties, the fraction will vary from one place to

another, e.g. for non-specified cirrhosis. Table 21 shows the conditions which have had attributable fractions assigned to them in three meta-analyses.

Table 21. Alcohol-attributable fractions of disorders tracked by WHO global alcohol monitoring database

DISORDER	ICD-9	ENGLISH ET AL. 1995	SCHULZ ET AL. 1991	SINGLE ET AL. 1998
Acute pancreatitis	577.0	0.24	0.42(2)	0.24
Alcohol abuse	305.0	1.00	1.00(1)	1.00
Alcohol dependence	303.0	1.00	1.00(1)	1.00
Alcoholic beverage poisoning	E860.0	1.00	1.00(1)	1.00
Alcoholic cardiomyopathy	425.5	1.00	1.00(1)	1.00
Alcoholic cirrhosis of liver	571.0-571.3	1.00	1.00(1)	1.00
Alcoholic polyneuropathy	357.5	1.00	1.00(1)	1.00
Alcoholic psychosis	291.0	1.00	1.00(1)	1.00
Aspiration	E911	1.00(1)	0.25(1)	0.25
Burns	E890-E899	0.44	0.45(3)	0.375
Chronic pancreatitis	577.1	0.84	0.60(2)	0.84
Drownings	E910	0.34	0.38(1)	0.299(m), 0.227(f)
Ethanol/methanol toxicity	980.0-980.1	1.00(1)	1.00(1,3)	1.00
Falls	E880-E888	0.34	0.35(1)	0.238(m), 0.152(f)
Gastritis caused by alcohol	535.3	1.00	1.00(1)	1.00
Homicide and purposeful injury	E960,65,66,68,69	0.47	0.46(1)	0.27
Motor vehicle traffic crash deaths	E810-E819	0.37(m), 0.18(f)	0.42(1)	0.43
Oesophageal varices	-	0.54 (m), 0.43 (f)	-	-
Suicide	E950-E959	0.41(m), 0.16(f)	0.28(1)	0.272(m), 0.168(f)
Unspecific cirrhosis of liver	517.5-571.9	0.54(m), 0.43(f)	0.50(1)	0.54

¹Age range 15-85 years or older.
²Age range 35-85 years or older
³Age range 0-85 years or older
Adapted from WHO, unpublished,; English et al. 1995; Schultz et al. 1991 and Single et al. 1998.

Using standard populations to adjust for differences in national age structures, WHO has calculated standardized death rates (SDRs) for the major causes of alcohol-related death. Using globally standardized populations tends to inflate the rates for developing countries beyond the actual number of deaths, because the age structures there tend toward younger ages, while some of the conditions happen primarily in later years. The overall rate of adult per capita consumption of alcohol, and the quantities and frequencies with which the alcohol is consumed, influence whether chronic or acute consequences of alcohol are most salient in each country.

Chronic consequences of alcohol use

There are no categories of disease or injury that are completely reliable indicators for the level of alcohol-related harm in a society. Problems of under-reporting on the one hand and anecdotal over-attribution on the other abound. The most commonly reported mortality category that is fully alcohol-caused is alcohol dependence syndrome. Alcohol dependence syndrome is the name of the disorder category assigned to deaths in which heavy drinking is somehow involved. In practice, it may be used to refer to a fatal overdose, or to a history of heavy drinking which is considered to have caused the death. Coding practices for this category vary from one place to another, and the meaningfulness of comparisons between one country and another is questionable. US researchers have identified several common reasons for under-reporting of alcohol dependence, including patient denial; provider failure to take a drinking history; lack of accurate laboratory tests measuring long-term heavy alcohol consumption; and reluctance to use the diagnosis to avoid stigmatizing the patient or patient's family (Dufour & Caces, 1993).The latter is also reportedly true in other cultures. In reporting alcohol dependence as a principal cause of death, these factors and resultant under-reporting may only be

exacerbated. Despite the limitations of reported alcohol dependence as an indicator of actual alcohol use, these statistics are important from a global perspective, because there is sufficient reporting to permit some cross-national comparisons. Recent data were available from 51 countries. Table 22 below uses age-standardized population estimates to calculate standardized death rates (SDRs, based on world standard populations) per 100 000 population for these countries.

Table 22. SDR (per 100 000 population) for alcohol dependence syndrome ICD-9 Code 303

COUNTRY	YEAR	TOTAL	MALES	FEMALES
Lithuania	1997	10.0	16.2	4.8
Hungary	1997	7.6	13.7	2.4
Latvia	1996	7.2	11.9	3.3
Mauritius	1996	6.3	12.4	0.5
Romania	1996	6.2	10.7	2.0
Luxembourg	1997	5.5	8.3	2.8
Germany	1997	4.8	7.7	2.0
Denmark	1996	3.9	6.3	1.6
Mexico	1995	3.8	7.6	0.5
Norway	1995	3.8	6.5	1.3
Croatia	1996	3.4	6.4	1.0
Finland	1996	3.3	5.8	0.9
Republic of Moldova	1996	3.2	5.5	1.3
Poland	1996	3.1	5.9	0.5
Kazakhstan	1996	2.8	4.5	1.4
France	1996	2.8	4.7	1.0
Argentina	1993	2.7	5.2	0.6
Republic of Korea	1995	2.6	5.2	0.3
Austria	1997	2.5	4.1	0.9
Bahamas	1995	2.4	2.2	2.6
Slovenia	1996	2.3	4.1	0.8
Sweden	1996	2.1	3.5	0.9
Belize	1995	2.0	4.0	0.0
Chile	1994	1.9	3.6	0.3
Venezuela	1994	1.9	3.7	0.1
United States of America	1996	1.6	2.7	0.7
Belgium	1992	1.5	2.4	0.7
Canada	1995	1.4	2.2	0.7
Turkmenistan	1993	1.3	2.1	0.6
Trinidad and Tobago	1994	1.2	1.7	0.7
Bulgaria	1994	1.2	2.3	0.1
Estonia	1996	1.2	2.1	0.4
Ireland	1995	1.1	1.3	0.9
Thailand	1994	1.1	2.0	0.3
Australia	1995	1.0	1.5	0.4
Cuba	1995	1.0	2.0	0.1
Netherlands	1997	0.9	1.6	0.3
United Kingdom	1997	0.8	1.1	0.5
Costa Rica	1994	0.8	1.6	0.0
Former Yugoslav Republic of Macedonia	1997	0.7	1.3	0.1
Barbados	1995	0.5	1.2	0.0
Israel	1996	0.5	1.1	0.0
Italy	1993	0.4	0.6	0.1

Table 22. Continued

COUNTRY	YEAR	TOTAL	MALES	FEMALES
Slovakia	1995	0.4	0.6	0.1
Spain	1995	0.4	0.8	0.1
Czech Republic	1997	0.3	0.4	0.1
Portugal	1996	0.3	0.6	0.1
Japan	1997	0.3	0.5	0.1
Greece	1997	0.2	0.4	0.0
New Zealand	1994	0.2	0.5	0.0
Colombia	1994	0.1	0.2	0.0

Source: WHO Global Programme on Evidence and Information for Health Policy

Cirrhosis of the liver is another commonly used indicator of the long-term health impact of alcohol use or of the amount of heavy alcohol consumption occurring in a population (Bruun et al., 1975; Edwards et al., 1994). In non-tropical developed countries with substantial alcohol consumption, alcohol is likely to cause more than 80 per cent of liver cirrhosis (Edwards et al., 1994). Risk for cirrhosis becomes significant when average daily intake is at, or above, 80 grams of alcohol per day for men and 20 grams for women (Grant, Dufour & Harford, 1988). Numerous studies, primarily in European countries, have validated the etiologic importance of alcohol in liver cirrhosis in those countries by showing strong associations between changes in per capita alcohol consumption and rates of liver cirrhosis mortality (Corrarao et al., 1997; de Lint, 1981; Skog, 1984; Norström, 1987; Leifman & Romesljö, 1997; Skog, 1980).

ICD-9 offers discrete classifications of alcoholic and unspecific cirrhosis of the liver. However, because of problems of under-reporting in this category (similar to those associated with alcohol dependence described above), epidemiologists have generally used total cirrhosis as a more reliable indicator. Reporting of a more general indicator, chronic liver disease and cirrhosis, is more common than that of either alcoholic or total cirrhosis. More recent and complete data, permitting comparison between a larger number of countries, is available in this category. This composite category includes alcoholic and other forms of cirrhosis of the liver as well as alcoholic fatty liver, acute alcoholic hepatitis, unspecific alcoholic liver damage, chronic hepatitis, biliary cirrhosis, and other chronic liver diseases. Recent data are available from 57 countries. The danger in using this as an indicator is that cirrhosis and other liver problems not caused by alcohol use (such as cirrhosis caused by infectious disease in tropical regions and chronic liver disease association with hepatatis B and C) are included as well as the alcohol-related cirrhosis deaths.

The inclusiveness of the category must be kept in mind when reviewing the data; however, chronic liver disease and cirrhosis are the most internationally available indicators of alcohol-related disorders. Translating total deaths from chronic liver disease and cirrhosis into standardized death rates permits international comparisons. These comparisons begin to illustrate the points made above about the interaction between per capita alcohol consumption and patterns of alcohol consumption.

Table 23. SDR (per 100 000 population) for chronic liver disease and cirrhosis ICD-9 Code 571

COUNTRY	YEAR	TOTAL	MALES	FEMALES
Republic of Moldova	1996	69.2	75.6	64
Hungary	1997	46.6	75	22.9
Romania	1996	39.5	55.8	25
Mexico	1995	34.9	55.7	16.1
Turkmenistan	1993	32.1	39.1	25.9
Republic of Korea	1995	27.6	49.9	8.9
Chile	1994	23.8	36.8	12.6
Kazakhstan	1996	22.4	31.6	15.4
Slovenia	1997	21.5	31.9	12.7
Mauritius	1996	20.9	38.3	4.7
Croatia	1997	20.8	34.3	10.4
Slovakia	1995	16.8	28.6	7.1
Bahamas	1995	16.7	23.2	10.8
Austria	1997	16.1	25.5	8.1

Table 23. Continued

COUNTRY	YEAR	TOTAL	MALES	FEMALES
Portugal	1996	15.9	25.5	7.9
Bulgaria	1994	14.8	24.8	5.8
Costa Rica	1994	14.7	19.6	10
Italy	1993	14.3	20.3	9.2
Germany	1997	14.1	20.8	8.2
Venezuela	1994	12.7	20.5	5.4
Barbados	1995	12.1	22.4	4.2
Czech Republic	1997	11.5	17.6	6.1
Luxembourg	1997	11.4	16.8	6.6
France	1996	11.3	16.5	6.7
Spain	1995	11	17.3	5.5
Estonia	1997	10.8	16.1	6.6
Lithuania	1997	10	14.8	6.1
Denmark	1996	9.5	13.5	5.7
Poland	1996	9.4	14.9	4.9
Latvia	1997	8.9	13.9	5.2
Finland	1996	8.5	13.1	4.1
Belgium	1992	7.8	10.5	5.4
Trinidad and Tobago	1994	7.7	11.6	3.5
Argentina	1993	7.6	12.9	3.2
United States of America	1996	7.2	10.3	4.4
Cuba	1995	7.1	9.3	4.9
Macedonia	1997	6.6	10.6	3
Japan	1997	6.3	10	2.9
Switzerland	1994	6.1	9.1	3.5
United Kingdom	1997	6	7.7	4.3
Albania	1993	6	7.5	4.6
Colombia	1994	5.9	8.6	3.5
Canada	1995	5.6	8.2	3.3
Thailand	1994	5.3	8.1	2.8
Belize	1995	4.6	3.6	5.4
Singapore	1997	4.4	7.1	1.8
Israel	1996	4.3	6.4	2.5
Australia	1995	4.3	6.5	2.2
Malta	1997	3.8	5.8	2.1
Netherlands	1997	3.5	4.3	2.6
Sweden	1996	3.4	4.9	1.9
Kuwait	1994	3.3	3.5	2.7
Norway	1995	3.2	4.4	2.1
Greece	1997	3	4.8	1.4
New Zealand	1994	2.9	3.8	2.1
Ireland	1995	2.3	2.3	2.3
Iceland	1995	1.1	0.7	1.6

Source: WHO Global Programme on Evidence and Information for Health Policy

Acute consequences of alcohol use

Alcohol-related motor vehicle crashes are among the most serious acute consequences of alcohol use. Such crashes are a much more significant factor in overall mortality in countries that are heavily reliant on the automobile. As with other acute causes of alcohol-related mortality, they tend to kill users at younger ages than the chronic diseases associated with alcohol use, and thus cause greater years of potential life lost to death and disability as well as greater losses in productivity over the expected life-span. In the USA, for example, where motor vehicle crashes are the leading cause of death of persons under 25, nearly 70 per cent of young adult (aged 20-24 years) deaths in motor

vehicle crashes involve alcohol (Zador, 1989). An estimated 15 per cent of non-fatal motor vehicle injuries occur in crashes involving drivers who have been drinking, and in 95 per cent of these cases, the driver had a blood alcohol concentration (BAC) of more than 0.10 g% (Miller, Lestina & Spicer, 1998). In the US, fatal motor vehicle crash rates have been found to be closely affected by beer sales, less closely influenced by spirits sales, and unrelated to wine sales (Gruenewald & Ponicki, 1995), roughly reflecting patterns of drinking among young drivers.

According to the international reviews estimating aetiologic fractions attributable to alcohol use, between 37 to 43 per cent of male and 18 to 43 per cent of female deaths from motor vehicle crashes are attributable to alcohol. However, the studies on which these fractions are based are from a very narrow range of societies. In countries where driving and behaviour are generally more dangerous, the alcohol attributable fraction is likely to be lower. Recent data on motor vehicle crash deaths are available from 64 countries.²

Table 24. SDR (per 100 000 population) for motor vehicle crashes ICD9 Codes E810-819

COUNTRY	YEAR	TOTAL	MALES	FEMALES
Republic of Korea	1995	36.1	54.2	19.5
Latvia	1995	27.7	45.8	11.0
Venezuela	1994	24.0	38.7	9.4
Kuwait	1994	23.2	32.2	10.3
Belize	1995	20.7	39.1	2.2
Portugal	1996	19.4	31.0	8.6
Greece	1997	18.9	29.3	8.6
Colombia	1994	18.6	30.2	7.7
Costa Rica	1994	18.2	29.9	6.8
Russian Federation	1996	18.0	27.7	8.8
Lithuania	1997	17.9	27.9	8.8
Ukraine	1992	17.9	29.8	7.1
Cuba	1995	16.7	25.7	7.7
Slovenia	1996	16.6	25.9	7.4
Mexico	1995	16.2	26.4	6.8
Republic of Moldova	1995	16.0	26.3	6.5
New Zealand	1994	15.7	22.1	9.5
Poland	1996	15.5	24.7	6.7
Belarus	1993	15.5	26	5.9
United States of America	1996	15.0	20.5	9.6
Belgium	1992	14.9	22.2	7.6
Estonia	1996	14.3	22.9	6.0
Luxembourg	1997	13.7	20.4	6.7
Slovakia	1993	13.6	21.8	5.9
Mauritius	1996	13.1	21.3	5.1
Spain	1995	12.6	19.6	5.8
Kazakhstan	1996	12.5	19.1	6.2
Italy	1993	12.4	19.8	5.3
Armenia	1992	12.4	20.7	5.0
Romania	1993	12.4	19.2	5.9
Bulgaria	1994	12.3	19.2	5.5
Chile	1994	12.1	20.2	4.6
Kyrgyzstan	1996	12.0	19.0	5.4
France	1996	11.9	17.7	6.3
Austria	1997	11.7	18.0	5.5
Albania	1993	11.4	18.8	4.5
Turkmenistan	1994	11.3	17.7	5.1
Hungary	1997	10.9	17.0	5.3

² These data are for total, not solely alcohol-related motor vehicle crashes. There is no standard code within ICD-9 for alcohol-related motor vehicle crashes. The addition of the codes Y-90 and Y-91 to ICD-10, denoting alcohol involvement in injury, as they come into use, will facilitate such reporting.

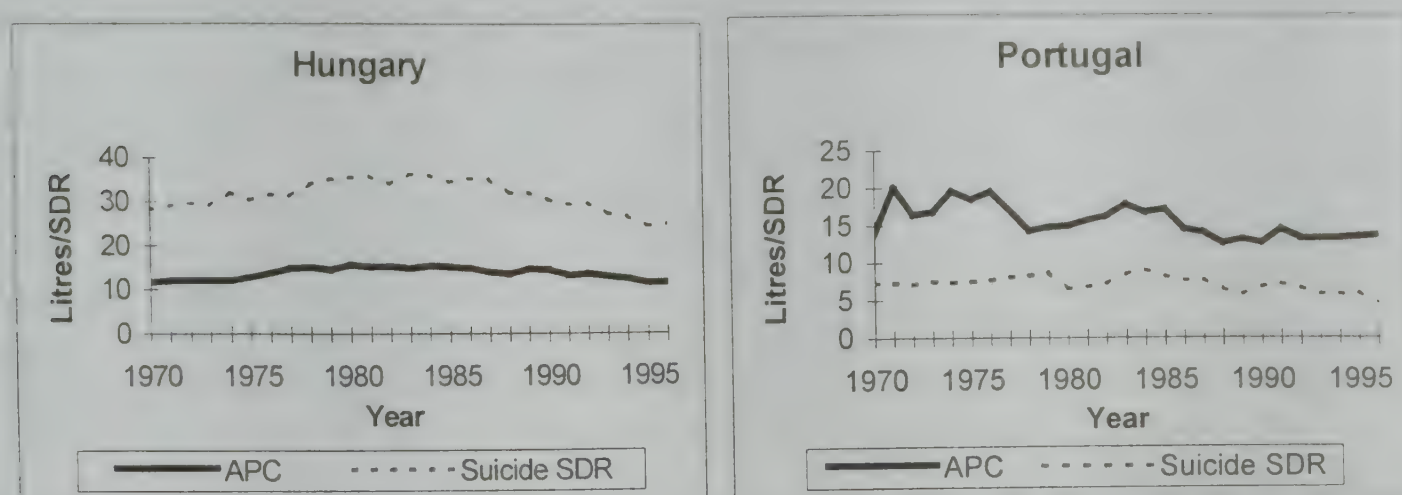
Table 24: Continued

COUNTRY	YEAR	TOTAL	MALES	FEMALES
Croatia	1996	10.7	17.0	4.6
Ireland	1995	10.7	16.3	5.1
Trinidad and Tobago	1994	10.4	15.1	5.3
Tajikistan	1992	10.3	16.3	4.5
Argentina	1993	10.1	16.1	4.5
Australia	1995	9.8	13.9	5.9
Canada	1995	9.8	13.4	6.2
Germany	1997	9.7	14.7	4.7
Uzbekistan	1993	9.3	15.1	3.9
Iceland	1995	9.1	11.6	6.7
Singapore	1997	8.8	14.4	3.3
Israel	1996	8.5	12.3	4.9
Denmark	1996	8.4	12.5	4.4
Switzerland	1994	8.1	12.1	4.2
Japan	1997	7.8	11.6	4.0
Barbados	1995	7.6	14.4	1.8
Finland	1996	6.9	10.0	3.9
Norway	1995	6.5	9.3	3.6
Former Yugoslav Republic of Macedonia	1997	6.4	9.4	3.4
Netherlands	1997	6.2	8.9	3.5
Czech Republic	1997	5.9	9.0	2.9
Bahamas	1995	5.8	8.2	3.3
United Kingdom	1997	5.7	8.6	2.8
Azerbaijan	1996	5.5	8.9	2.4
Malta	1997	5.1	9.7	0.6
Sweden	1996	4.7	6.5	2.9

Source: WHO Global Programme on Evidence and Information for Health Policy

Data on other acute causes of death are less widely available. Numerous studies in various national contexts have found a relationship between alcohol consumption and suicide (Skog, 1993; Norström, 1988; Skog & Elekes, 1993; Rossow, 1993). Drinking practices and cultural expectations of how drinkers should behave are among the factors that may influence this relationship (Edwards et al., 1994). Hospital studies have indicated that alcohol dependent people are at 60 to 120 times greater risk of suicide death than the general population (Murphy & Wetzel, 1990; Roy, 1993), while a longitudinal study of Swedish conscripts found the risk of suicide death for high consumers of alcohol to be 5.1 times that for abstainers (Andreasson, Allebeck & Römelsjö, 1988). Further evidence of a relationship comes from population-based studies that have found suicide rates closely associated to general alcohol sales (Rossow, 1993; Skog & Elekes, 1993) and spirits sales (Gruenewald, Ponicki & Mitchell, 1995). The various meta-analyses have estimated that between 16 and 41 per cent of suicides are alcohol-attributable. Rates are generally higher for men than women. Several causal hypotheses have been advanced, including: alcohol use disinhibits suicidal impulses and aggression in general (Garrison et al., 1993); heavy drinking may be indicative of larger processes of social disintegration associated with suicide (Rossow, 1993; Yang, 1992); and expectations about alcohol's behavioural effects may moderate aggressive acts such as suicide (Pihl, 1983).

Figure 5. Adult alcohol consumption and suicide in Hungary and Portugal



Source: WHO Global Programme on Evidence and Information for Health Policy

Studies in Hungary and Portugal have illustrated the close correlations between per capita alcohol consumption and suicide rates that are evident in Figure 5 above. The relationship between alcohol and suicide is not limited to developed countries: an estimated 36.4 per cent of suicides in Sao Paulo, Brazil in 1994 had BAC in excess of 80 g/ml. (Cotrim, 1997), while in Chile, between 1981 and 1983, 38.6 per cent of suicides were determined to be alcohol-related (PAHO, 1990). A 1993 study by Ethiopian researchers found a strong linear relationship between adolescent suicide attempts and alcohol intake (Kebede & Ketsela, 1993), and in Mexico in 1980, 38 per cent of suicides had BAC in excess of 100 g/ml (Terroba, Saltijeral & del Corral, 1986). Researchers have also found substantial proportions of those who commit suicide meet clinical definitions for alcohol dependence. Alcohol dependence was one of the two most prevalent chronic mental disorders among those who committed suicide in Taiwan (Cheng, 1995), while alcohol abusers in Norway were 6.9 times as likely to commit suicide as the general population (Rossow & Amundsen, 1995).

Alcohol is likely to be present during homicides and violent assaults, in both perpetrators and victims, at least in some cultures. Time-series analyses have found significant relationships between aggregate alcohol consumption and rates of violent crime over time in France, Sweden, Norway and Finland (Lenke, 1990). In 1991 in the USA, according to inmate survey data, offenders were intoxicated in 42 per cent of homicides, 36 per cent of sexual assaults, 41 per cent of assaults, and 33 per cent of robberies (Beck et al., 1993). Using inmate survey data, researchers have estimated that 18 per cent of homicides, 15 per cent of sexual assaults and abuse, 17 per cent of physical assaults and child abuse, and 14 per cent of robberies involve alcohol (CSAP, 1997; Collins & Schlenger, 1988). However, they also note that the role of illicit drug use as a co-factor could not be determined. More evidence of a relationship between alcohol use and violence comes from aggregate-level studies of effects of changes in the alcohol supply. For instance, when an industrial strike interrupted the flow of wine and spirits production in Norway, domestic disturbances fell by 22 per cent and interpersonal violence by 15 per cent (Hauge, 1988). Two US studies have found a relationship between numbers of alcohol outlets and homicide rates (Parker & Rebhun, 1995; Scribner, MacKinnon & Dwyer, 1995), while another found that higher beer taxes were associated with lower violent crime rates (Cook & Moore, 1993).

Research in developing and Central and Eastern European countries has also found a close association between alcohol use and violence. Post-mortem studies of homicides in Brazil (Cotrim, 1997), Chile (PAHO, 1990), and South Africa (Duflou, Lamont & Knobel, 1988; Lerer, 1992; Loftus & Dada, 1992) found alcohol in the blood of close to or more than half of the respective samples. Perpetrators too were likely to be drunk at the time of the crime: in Mexico in 1985, 49 per cent of those convicted of homicide had been drinking (Herman, 1987), while in the Russia Federation 71 per cent of murders in 1994 were committed in a drunken state (Egorov, 1995). Alcohol was present in the blood of 47 per cent of those admitted to the emergency room with assault trauma in Lesotho in 1988 (Van der Geldermalsen & Van der Stuyft, 1993). Researchers in Papua New Guinea found that 60 per cent of all assaults in that country in 1983 occurred under the influence of alcohol (Giesbrecht et al., 1989).

Alcohol and the global burden of disease

The data provided above on chronic liver disease and cirrhosis, motor vehicle crashes, suicide and homicide give some indication of the global health impact of alcohol. Murray and Lopez (1996) attempted to quantify this impact more comprehensively in their study of the global disease burden of various health risks, including alcohol and tobacco. They used the aetiologic fractions estimated by English et al. (1995), scaled to reflect alcohol consumption patterns in regions of the world for which data for computing aetiologic fractions are more sparse. It should be noted that data are particularly sparse for developing countries and the countries of the former Soviet Union. For developed countries, the results of the English et al. (1995) meta-analysis were directly applied. Murray and Lopez also calculated an estimate for the protective effects of alcohol for each region using the relative risk of death from ischaemic heart disease and scaled estimates of the proportion of the population which abstains from alcohol.

Based on this methodology, alcohol caused an estimated 1.1 million deaths in 1990. Alcohol's cardio-protective effect averted 470 616 deaths, with a net loss in mortality from alcohol worldwide of 773 594 deaths. The protective effect is most notable in the developed countries, which suffered 40 per cent of the alcohol-related deaths but enjoyed 62 per cent of the deaths averted. Sixty percent of the alcohol DALYs worldwide came from years of life disabled. As Murray and Lopez noted, alcohol tends to kill and disable at young ages and protect from cardiovascular diseases at older ages, a pattern which results in a high number of years of potential life lost to death and disability despite alcohol's protective effect.

Table 25. Global burden of disease and injury attributable to alcohol use in 1990

REGION ³ (WORD BANK)	DEATHS (THOUSANDS)	AS % OF TOTAL DEATHS	YEARS OF LIFE LOST (THOUSANDS)	AS % OF TOTAL OF YEARS OF LIFE LOST	YEARS OF LIFE DISABLED (THOUSANDS)	AS % OF TOTAL OF YEARS OF LIFE DISABLED	DISABILITY- ADJUSTED LIFE YEARS (DALYS) (THOUSANDS)	AS % OF TOTAL DALYS
EME	83.8	1.2	2 537	5.1	7 667	15.6	10 204	10.3
FSE	53.0	1.4	2 063	5.7	3 130	11.9	5 193	8.3
IND	112.9	1.2	2 723	1.4	1 974	2.3	4 697	1.6
CHN	114.1	1.3	2 118	1.8	2 737	3.0	4 856	2.3
OAI	97.4	1.8	1 862	1.6	3 191	5.1	5 053	2.8
SSA	170.7	2.1	4 435	2.0	3 169	4.6	7 603	2.6
LAC	136.1	4.5	3 319	5.9	6 201	14.7	9 520	9.7
MEC	5.6	0.1	229	0.2	437	1.0	666	0.4
World	773.6	1.5	19 287	2.1	28 400	6.0	47 687	3.5

Source: Murray and Lopez 1996.

Benefits and costs of alcohol

Alcohol provides some benefits both to individuals and to governments. While the less tangible benefits of conviviality, sociability and in some cases social solidarity are difficult to quantify, the global mortality estimates above are an effort to quantify alcohol's potential protective effect against cardiovascular disease. Alcohol also provides substantial revenues to governments, and particularly in some developing countries these revenues may supply a substantial portion of the national budget. In India, alcohol makes up as much as 23 per cent of some of the states' revenues (Bloomberg News,

³ The regional (geographical) groupings used by Murray and Lopez (1996) and the World Bank are as follows:

EME	Established Market Economies	OAI	Other Asia and Islands
FSE	Former Socialist Economies	SSA	Sub-Saharan Africa
IND	India	LAC	Latin America and the Caribbean
CHN	China	MEC	Middle Eastern Crescent

Very broadly speaking EME equates with "developed countries", FSE with "countries in transition" and the rest with "developing countries".

1997). In Estonia, excise and sales taxes from alcohol account for approximately 10 per cent of the 1995 budget (Jernigan, 1997). Nepal derives between 3.2 and 3.5 per cent of its total revenue from alcohol (Saxena, 1997), while in New Zealand the figure is 1.8 per cent (Casswell, 1997).

The social costs of alcohol include the direct costs of treating injuries and diseases as well as treatment and rehabilitation costs, property losses, law enforcement costs, and losses in productivity due to absenteeism or loss of productive life years. While there are not many countries that have calculated the social costs of alcohol, there are nearly as many methodologies for counting social costs as there are estimates of them. WHO has provided more detailed discussion of social cost methodologies (WHO, in press). Where estimates have been made, costs have been substantial. Such estimates included: in Australia in 1988, US\$ 3.09 billion (Collins & Lapsley, 1991); in Japan in 1987, US\$ 46.2 billion (Nakamura, Tanaka & Takano, 1993); in the USA in 1995, US\$ 166.5 billion (Harwood et al., 1998); in Poland in 1995, US\$ 2.5 billion (State Agency for the Prevention of Alcohol-Related Problems) in Poland in 1997; in South Africa in 1995, US\$ 2.7 billion (Parry & Bennetts, 1998).

Alcohol control policies

From its earliest days, WHO has placed a priority on solving alcohol related problems. A series of resolutions and publications beginning in 1975 established a policy framework for national efforts to control alcohol-related problems. Leadership in this effort has come both from WHO Headquarters in Geneva and from the WHO Regional Offices. The publication in 1975 of *Alcohol Control Policies in Public Health Perspective* (Bruun et al., 1975) was a watershed in providing a scientific basis for public policy approaches as means of influencing alcohol consumption and availability in order to reduce alcohol-related problems.

In 1979, the Thirty-Second World Health Assembly passed Resolution WHOA32.40, and urged WHO Member States to “take all appropriate measures to reduce the consumption of alcohol among all sectors of the population” and to “develop intensive preventive programmes that include public information and education concerning alcohol problems, and ensure the provision of appropriate legislation and other measures enabling effective action to be taken, for example in relation to the production and sale of alcoholic beverages.” In 1983, the Thirty-Sixth World Health Assembly passed Resolution WHA36.12, and recommended that WHO Member States “(1) formulate an explicit and comprehensive national alcohol policy, with prevention as a priority, within the framework of the strategy of health for all; (2) develop mechanisms to coordinate programmes and activities for reducing alcohol consumption and alcohol-related problems on a planned, continuous and long-term basis.”

Since that time, enormous experience has been gained and prodigious amounts of scientific research conducted on constructing comprehensive national alcohol policies. WHO has published a variety of summaries of that experience (see for example Rootman & Moser, 1984; Farrell, 1985; Moser, 1985; Moser, 1992), and supported or collaborated in research reviews delineating the scientific basis for various policy mechanisms. The most recent of these, *Alcohol Policy and the Public Good* (Edwards et al., 1994), reviewed in detail the state of scientific knowledge regarding the efficacy of a wide range of alcohol control policies, including taxation and other price mechanisms, controls over physical availability, policies targeting drinking in particular contexts such as drink-driving, information-based strategies, and individually-targeted interventions as a component of a public health response to alcohol. The bulk of the experience and research on these issues has been conducted in developed countries. A volume summarizing research and applications in developing nations is in preparation at the time of printing (Room et al., in press).

This section of the WHO Global Status Report on Alcohol provides a summary of the status of implementation of alcohol policies in WHO Member States. The prevention of alcohol-related problems requires a comprehensive approach, combining information and awareness programmes and treatment services with preventive policies adopted at national or local levels. WHO has, in another volume, reviewed the status of availability of resources and legislation regarding treatment (Porter, Argandóna & Curran, in press). The focus is on preventive measures, and in particular on alcohol control policies adopted in WHO Member States. The information presented is incomplete, but provides an overview of strategies tried.

Planning and implementation of alcohol policies

Few countries have designated a single central agency devoted to alcohol and alcohol problems. In most cases, responsibility for alcohol is diffused throughout national governments, including health ministries, taxation and customs authorities, food and nutrition departments, education ministries, ministries of social affairs, and ministries of justice and police. Some countries have centralized

planning for the reduction of alcohol and other drug problems in a single joint agency or a commission composed of representatives from several governmental departments. Nongovernmental organizations are also active participants or progenitors of alcohol awareness and prevention programming in many countries.

The European Alcohol Action Plan, developed by the WHO European Regional Office, has provided guidance to a number of countries in developing comprehensive national alcohol plans. Elsewhere, a few countries have developed plans specific to alcohol, particularly in cases such as France and Poland, where there is recognition at the national level that prevailing levels and patterns of alcohol use pose a significant threat to health and safety. One agency dedicated to alcohol issues, New Zealand's Alcohol Liquor Advisory Council, undertakes a variety of activities with funding from a levy on alcohol available for consumption, while Switzerland distributes proceeds from the tax on distilled spirits to cantons for prevention and treatment of alcohol and other drug problems. However, this kind of earmarked funding is rare. By far the most common approach to planning and implementation of programmes to reduce alcohol-related problems is by creating plans and agencies that deal with all psychoactive substances, including alcohol, tobacco, and illegal psychoactive drugs.

Education and health promotion

Although there is little scientific evidence of their efficacy in the absence of other control measures (Paglia & Room, 1998), many countries have implemented alcohol educational and health promotion programmes, usually in schools but also in local community and health centres. The most common targets of educational programmes are young people. In some cases these may be peer-led and designed. Mass media campaigns regarding specific problems such as drink-driving are also common. However, general health-oriented messages about drinking must compete with other persuasional messages in the environment, including ones intended to sell alcohol. Evidence of the effectiveness of these messages in influencing teenagers and young adults to drink more and problematically is increasing (Wyllie, Zhang & Casswell, 1998a; Wyllie, Zhang & Casswell, 1998b). Even where advertising of alcoholic beverages is not permitted, these messages are conveyed in a variety of other ways, undercutting efforts to send a preventive message.

Regulation of physical availability

A wide range of studies, mostly in the developed world, have demonstrated that restrictions on the production and sale of alcohol can reduce alcohol consumption and related problems (Edwards et al., 1994). There are many ways in which the physical availability of alcohol may be restricted, for instance via limitations on the number and placement of outlets, hours or days of sale, placement of alcohol products within an outlet, training managers and servers in safe service practices, and so on. For example, New Zealand has promoted server training in order to increase the likelihood that when alcohol is served, patrons will be less likely to drink to intoxication or drive away from the premises intoxicated. The most drastic of such restrictions is outright prohibition of the production and sale of alcohol. This is not uncommon in predominantly Islamic countries such as Bangladesh, Maldives and Saudi Arabia. Other countries, such as the United States, New Zealand and India, permit local or state authorities to render their jurisdictions dry. Pakistan permits alcohol consumption by non-Muslims, but forbids it for the 97 per cent of the population that is Islamic.

Table 26. Examples of countries with strong legal prohibition of alcohol production or sales

COUNTRY	PROHIBITION TYPE
Bangladesh	Complete prohibition of production, sale and consumption.
India	State option. One state has prohibition; four others recently experimented with it but have repealed it.
Maldives	Complete prohibition of production and consumption of alcohol except by tourists.
New Zealand	Partial prohibition – available by local option – five remaining dry areas as of 1990.
Pakistan	Complete prohibition for Muslims, non-Muslims need licence to drink.
Saudi Arabia	Complete prohibition of alcohol use.
United States of America	Partial prohibition – banning of sales permitted as local option in some states

Far more common than outright prohibition are partial prohibitions, mostly concerning consumption of alcohol in areas considered to be at high risk. These may include workplaces (e.g. Belarus, Belgium, Kyrgyzstan, the Netherlands) as well as areas near workplaces (e.g. Mexico). Italy bans sale of drinks containing more than 20 per cent alcohol at a wide range of public events, including sporting events, amusement parks, and open air concerts. Ecuador bans the sale of alcohol in health or educational institutions, while Egypt permits it only in hotels and tourist establishments.

Restrictions on availability to young people

Perhaps the most common form of alcohol prohibition is the setting of a legal minimum age for purchase or consumption. Several studies, most undertaken in North America, have indicated that such restrictions are effective at reducing motor vehicle crash fatalities among young people, even at relatively low levels of enforcement (Edwards et al., 1994; Wagenaar & Wolfson, 1995). At least 67 countries have some kind of minimum age legislation in place. The most common minimum age for legal purchase of alcoholic beverages is 18, although at least eight countries require drinkers to wait until age 21 years, while 15 permit drinking at age 16 years. Germany and Switzerland permit purchase of fermented beverages at age 16 years, but drinkers must be 18 years to buy distilled spirits.

Table 27. Examples of countries with laws setting minimum ages for alcohol purchase or consumption

COUNTRY	AGE	LEGISLATION
Argentina	18	Bans consumption.
Australia	18	Bans purchase and sales.
Austria	18	For consumption spirits in public in all 9 federal states; in 8 federal states limit for drinking wine and beer in public is age 16; in one, age 15.
Belarus	21	Bans purchase of alcohol.
Belgium	16	Bans purchase of alcohol.
Bhutan	18	Bans sale of alcohol.
Brazil	18	Bans consumption.
Bulgaria	18	Bans purchase of alcohol.
Canada	19	Exceptions: Age 18 in Quebec, Manitoba, Alberta.
Chile	21	Bans consumption.
Colombia	18	Bans consumption.
Cook Islands	18	Bans sale or other supply.
Croatia	18	Bans purchase.
Czech Republic	18	Bans purchase.
Denmark	18	Bans purchase in restaurants and bars.
Egypt	21	Bans consumption.
Estonia	18	Bans purchase.
Fiji	18	Bans possession or consumption in public or in licensed premises.

Table 27. Continued

COUNTRY	AGE	LEGISLATION
Finland	18	Bans purchase.
France	16	Bans purchase.
Gambia	16	Bans sales.
Greece	18	Bans purchase in public places such as bars and discos.
Honduras	21	Bans consumption.
Iceland	20	Bans purchase.
India	18	Bans sale.
Israel	18	Bans sale.
Italy	16	Bans sale.
Japan	20	Bans consumption and service in public.
Kenya	18	Bans sale.
Kyrgyzstan	18	Bans purchase.
Latvia	18	Bans purchase.
Lithuania	18	Bans purchase.
Luxembourg	16	Bans purchase.
Malta	16	Bans purchase.
Mexico	18	Bans sales.
Morocco	16	Bans sales.
Mozambique	18	Bans purchase.
Netherlands	18	Bans purchase. Age 16 for buying beer or wine.
New Zealand	20	Bans purchase, sale, and supply, except in certain kinds of premises with meals in the presence of responsible relatives.
Norway	20	Bans purchase. Age 18 for buying beer or wine.
Panama	18	Bans consumption.
Peru	18	Bans consumption.
Poland	18	Bans purchase.
Republic of Moldova	18	No further information available.
Romania	18	Bans purchase.
Russian Federation	18	Bans purchase.
Samoa	21	Bans possession or consumption on licensed premises, in any other public place.
Seychelles	18	Bans purchase.
Slovakia	18	Bans purchase.
Slovenia	18	Bans consumption in restaurants and bars. No age limit for purchase in shops.
Solomon Islands	21	Bans sales or other supply.
South Africa	18	Bans sales.
Spain	16	Bans purchase. Age 18 in some regions.
Sri Lanka	18	Bans consumption.
Sweden	20	Bans purchase in state liquor stores. Age 18 for purchase in restaurants and purchase of medium strength beer sold in grocery stores.
Switzerland	18	Bans sale or purchase of distilled beverages. Age 16 for fermented beverages.
Thailand	17	Bans purchase.
The former Yugoslav Republic of Macedonia	16	Bans purchase.
Tonga	18	Bans possession or consumption on licensed premises or in other public place.
Trinidad and Tobago	16	Bans consumption.
Turkey	18	Bans purchase.
Turkmenistan	18	Bans purchase.
Ukraine	21	Bans purchase.
United Kingdom	18	Bans purchase. Possible to consume some alcoholic beverages in bars or restaurants at age 16.

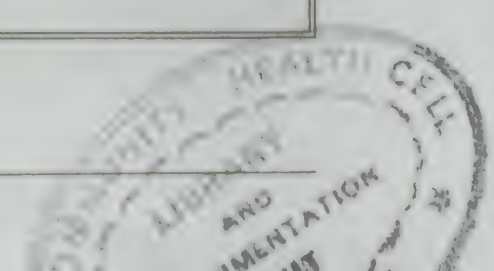


Table 27. Continued

COUNTRY	AGE	LEGISLATION
United Republic of Tanzania	16	Bans presence on premises where alcohol is served.
United States of America	18-21	Bans on sale, purchase, possession and consumption vary by state.
Uruguay	18	Bans sale.

At least 18 countries have full or partial monopolies over the production of alcohol, wholesale and/or retail sale of alcohol, or some combination of these three. Amidst substantial ideological and economic pressure to privatize monopoly distribution systems, a number of studies have looked at what happens to alcohol sales when alcohol monopolies turn private. In part because the number of outlets and hours of sale typically increase, levels of alcohol consumption and problems tend to increase as well (Minghao et al., unpublished).

Monopolies and licensing systems

Some countries, such as the United States, permit local or regional authorities to decide between licensed or monopoly distribution systems. Production monopolies were the rule in the countries of the former Soviet Union. Some have kept their monopolies; others such as the Russian Federation have abolished them temporarily and then moved to re-establish them. Some countries monopolize production of some alcoholic beverages but license others. This scheme most commonly places production of beer into the hands of licensees, and most commonly keeps spirits production in the hands of the state. In Europe, national production monopolies have been the target of free market reforms, and have been abolished in Norway, Finland and Sweden. However, state-run distribution systems have proven more resistant to privatization.

Table 28. Examples of countries with alcohol monopolies

COUNTRY	TYPE OF MONOPOLY
Belarus	State monopoly on production.
Bulgaria	State monopoly on production and trade.
Canada	Provincial monopolies controlling sale of alcohol for off-premises consumption.
Finland	Retail monopoly on alcoholic beverages (except fermented products under 4.7% alcohol by volume).
France	Wholesale monopoly on brandy.
Germany	Wholesale monopoly on brandy.
Kazakhstan	No information available on type of monopoly.
Latvia	Monopoly on production of wines and spirits. Licence required for distribution.
Lithuania	Monopoly on production of wine and spirits.
Norway	Monopoly on spirits production, retail sales.
Russian Federation	Licensing system for production and distribution currently exists alongside traditional state monopoly.
Sweden	State monopoly on retail sales, except sale of medium or lower-strength beer permitted in grocery stores.
Switzerland	State monopoly on production of spirits, but not of wine, beer and cider made by fermentation. Monopoly grants licences to other producers.
The former Yugoslav Republic of Macedonia	State monopoly on production and distribution of all three types of alcoholic beverages.
Turkey	State monopoly on production and distribution of spirits.
Turkmenistan	State monopoly on production of all three types of alcoholic beverages.
Ukraine	State monopoly on production of spirits and fortified wine.
United States of America	License or monopoly a state option. 18 states have wholesale monopoly, of which 10 have retail monopoly, 3 contract out retail operations to agencies, while the remainder do not have retail monopoly.
Uruguay	State monopoly on spirits production, which may license other producers.

A more common method of restricting physical availability is through licensing, both of production and sale of alcohol. More than 40 countries operate some kind of licensing system. Coupled with such systems are often restrictions on the hours and days when alcohol may be sold. Numerous studies have found that such restrictions, if enforced, can influence alcohol consumption patterns (Edwards et al., 1994). In some countries these restrictions are well-enforced. However, laws aimed at reducing alcohol availability are notoriously subject to disobedience. In areas lacking strong central authorities, social consensus in favour of restrictions, or both, restrictions on availability may have little impact on actual production or sale of alcohol.

Table 29. Examples of countries with alcohol licensing systems

COUNTRY	TYPE OF LICENSING SYSTEM
Australia	Licence required for sale of alcohol.
Austria	Licence required for production, sale or trade.
Belarus	State production monopoly, licence required for distribution.
Bolivia	No further information available.
Cameroon	No further information available.
Canada	Provincial monopolies control sale of alcohol for off-premises consumption. Provincial licensing systems also control sale for on-premises consumption, and for off-premises sale of beer.
Cook Islands	Licence required for sale of alcohol.
Czech Republic	Licence required for production or distribution of beer, wine or spirits.
Denmark	Licence required for production and distribution of all types of alcoholic beverages.
Estonia	Licence required for production and sale of alcoholic beverages. No sale of alcoholic beverages in or close to medical and children's institutions.
Fiji	Licences required for the sale of alcohol.
Finland	Licence required for wholesale distribution of alcohol, for on-premises consumption, and for retail sale for off-premises consumption of beer and fermented beverages less than 4.7% alcohol by volume.
Gambia	Licence required for retail sale.
India	Licensing required if alcohol is legal.
Ireland	Licence required for the production and distribution of all types of alcohol (except home-made wine and beer).
Italy	Licence required for production and distribution of beer, wine and spirits.
Japan	Licence required for production of alcoholic beverages, and for off-premise but not on-premise sales.
Kazakhstan	Licence required for retail sale.
Kenya	Licences to bars to brew and sell traditional African alcoholic beverages available only in the larger cities.
Lithuania	Licence required for distribution of alcohol, production of beer.
Malawi	Licence required for sale of alcohol.
Malaysia	Licences required for production and sale of alcohol.
Malta	Licence required for distribution and production of all three types of alcoholic beverages except for home produced wine.
Mexico	Licence required for the sale of alcohol.
Nepal	Licence required for production, sale, import and export of liquor, with the exception of small amounts produced for home use.
Netherlands	Licence required for on-premises sale of all alcoholic beverages, sale of spirits for off-premises consumption.
New Zealand	Licences required for on- and off-premise sale of alcohol. 24-hour licences available.
Norway	Licence required for beer or wine production or import/export, and for on-premises consumption, and sale of beer for off-premises consumption.
Pakistan	Drinking permitted for non-Muslims with a drinking licence.
Papua New Guinea	Retail outlets licensed at the provincial level.
Poland	Licence required for production of spirits, distribution of all three types of alcoholic beverages.

Table 29. Continued

COUNTRY	TYPE OF LICENSING SYSTEM
Portugal	Licence required for production and distribution of beer, wine and spirits.
Republic of Moldova	Licence required for the sale of alcohol.
Russian Federation	Licensing system for production and distribution currently exists alongside traditional state monopoly.
Samoa	Sale of alcohol and trading hours regulated by licences granted at the community level.
Slovakia	Licence required for distribution of all three types of alcoholic beverages.
Solomon Islands	Outlets for consumption or sale licensed at the provincial level.
South Africa	Licence for on- or off-premise sales of alcohol required.
Spain	Licence required for production and distribution of beer, wine and spirits.
Sweden	Licence required for production or trade, for sale for on-premises consumption, and for sale of medium or lower-strength beer in grocery stores or for other forms of off-premises consumption.
Switzerland	Spirits monopoly grants licences to other producers.
Tonga	Trading hours set by licence.
Turkey	Licence required for production and distribution of beer and wine.
Turkmenistan	Licence required for distribution of alcohol.
Ukraine	Licence required for production of beer and table wine, and for distribution of all three types of alcoholic beverages.
United Kingdom	Licence required for production or distribution of beer, wine or spirits.
United Republic of Tanzania	Licence required for commercial sale of traditional brews.
United States of America	Licence or monopoly a state option. 32 states have licence system, while states with only a wholesale monopoly also license retail sales.
Uruguay	State monopoly for spirits production may licence other producers.
Venezuela	Number of licensed outlets limited by formula.
Zimbabwe	Licence required for retail sale of alcohol.

Taxation and other pricing regulations

Although seldom designed purely as such, alcohol taxes may be a potent tool of prevention policy. For price-sensitive young drinkers in particular, increases in alcohol taxes have been shown in some developed countries to be effective in reducing harmful consequences of drinking such as traffic casualties, cirrhosis deaths, and violence (Cook, 1981; Cook & Moore, 1993). A few countries, such as the Gambia and Sweden, are explicit in their use of tax policy to discourage alcohol consumption. Alcohol taxes are more commonly employed simply as revenue-generating mechanisms for governments, and as discussed above, may supply as much as 20 per cent of government budgets.

Taxes may be levied at producer, wholesale or retail levels. Imported beverages have often been subjected to higher duties than domestic production, but this policy is feeling the weight of the global trend toward tariff reductions. Taxes may take the form of value-added or general sales taxes, or they may be pegged to the alcohol content or the retail price of the beverage. It is not uncommon for distilled spirits to carry a higher rate of taxation than the beverages with lower alcohol content. Some countries or regions levy little or no tax on beverages produced by local production industries. This is most commonly the case with wine producing countries such as Australia, which grants wine preferential tax treatment. However, the Russian Federation, at the behest of St. Petersburg brewers, recently declared beer a non-alcoholic beverage for tax purposes (Impact International, 1997).

Taxes that are based on a flat amount per unit of alcohol rather than on a percentage of the sale price have the disadvantage of losing value with inflation, leading to a situation where the real price of alcohol may fall relative to other beverages because the effective tax rate is falling. The European Regional Office of WHO estimated that this was the case for at least one category of alcoholic beverage in 17 European countries in the first half of the 1990s (Harkin, 1995).

Effective use of taxation as a preventive policy requires that the state have a certain degree of control over the alcohol market. If substantial home or informal production or sale of alcohol exists,

as is the case in many developing countries and in some regions of the former Soviet Union and Eastern Europe, then increases in alcohol taxes taken for preventive purposes may simply transfer alcohol sales from the licit to the illicit market. Tax increases are more likely to be viewed as unsuccessful from a revenue-generating than a preventive standpoint. For instance, in February of 1995 Zimbabwe raised taxes on clear and opaque beers, and then repealed the increase in July after drinkers migrating to illegally-produced beverage, caused a significant decline in alcohol tax revenue to the fiscus (Jernigan, 1997).

Taxes are not the only strategy used to influence alcohol prices. "Happy hours" and other forms of price discounting are common in some countries. Such promotions may encourage heavy alcohol consumption during a limited time duration, and as such may contribute to the incidence of heavy drinking and its health and safety consequences.

Product labelling

Indication of alcohol content is the most common form of labelling on alcoholic beverage containers. Such labels are required in at least 40 countries. Some countries, such as Australia, also require labels to include an estimate of how many standard drinks are contained in the container. Ingredient labelling is much less common, particularly for wine and distilled spirits. However, some countries obviate the need for ingredient labelling through strict enforcement of purity laws such as Germany's requirement that beer be made only from barley, hops and water.

Warning labels on alcoholic beverage containers are required nationally in at least nine countries (Brazil, Colombia, Costa Rica, Ecuador, Honduras, Mexico, South Korea, United States, and Zimbabwe), and at the state or provincial level in two others. (In India, every state where alcohol is permitted has a label that is encouraged but not mandated by the national government, and in Canada, labels are a provincial option.) As with other informational strategies, the efficacy of such labels is difficult to measure, due to the challenge of isolating the impact of the label from other educational efforts occurring in the environment. Research on the US warning label, enacted in 1989, has found that the message is reaching the target audience of young people and heavier drinkers, and that the more exposure drinkers report to the warning, the more likely they have been to adopt harm-reduction strategies related to drinking and driving or drinking when pregnant (Greenfield, 1997). Experience from tobacco package labelling in the US suggests that regular rotation of the content of the warning label increases the label's impact (Myers et al., 1981). Such labels may be one step toward treatment of alcohol as a special commodity requiring restrictions even in a free market environment due to the dangers that unrestricted alcohol consumption may pose to public health and safety.

Regulation of promotional activities

Some kind of regulation of alcohol advertising exists in at least 37 countries, as shown in Table 30 below. Many such regulations seek to protect young people from seeing alcohol advertisements. Recent research has suggested that the evidence showing that alcohol advertising does influence the drinking habits of young people and young adults is growing stronger (Wyllie, Zhang & Casswell, 1998a; Wyllie, Zhang & Casswell, 1998b). Another recent study found a positive relationship between alcohol advertising and motor vehicle fatalities in the USA (Saffer, 1997).

Mexico, Panama and Paraguay require warning messages on alcohol advertisements. More common strategies for regulating the promotion of alcoholic beverages are the use of voluntary codes and the outright banning of advertising for certain or all alcoholic beverages in some or all media outlets. At least 29 countries have implemented bans on alcohol advertising in at least one medium. Most such bans cover all three beverage categories on at least television and radio. However, in areas such as Belarus with easy access to foreign television channels and relatively little domestic broadcast production, such bans are difficult to enforce. Elsewhere, however, for example in France, enforcement has been strict and effective, even at risk of angering the multinational brewing companies who sponsor major sporting events such as World Cup football.

An additional ten countries impose partial restrictions on alcohol advertising, most commonly banning advertising during daytime and early evening hours when young people are likely to be in the

viewing audience in substantial numbers. Some countries such as Canada prohibit specific content in alcohol advertising, including attempts to influence non-drinkers to drink, associating alcohol consumption with high-risk activities, or implying that alcohol consumption leads to social, athletic or business success. Honduras bans advertising that offends the dignity of women or that ties the use of alcoholic beverages to sports. Spain prohibits advertising of beverages containing more than 20 per cent alcohol on television and radio, and any alcohol advertising in schools, sports centres and health institutions. At least two countries permit alcohol advertising, but have attempted to run counter-advertising campaigns to balance the positive messages about alcohol with health and safety information. In 1993, Costa Rica estimated that 71 271 messages promoting beer, rum, vodka and whisky consumption appeared in the country's television, radio and print media for that year, and an attempt was made to place counter-messages in the same media in that year. When it removed its restriction on advertising of alcoholic beverage brands in 1992, New Zealand required the broadcast media to allocate US\$ 771 300 per year to run moderation and other public health-oriented advertisements.

At least 14 countries rely primarily on voluntary codes of good advertising practice to regulate alcohol advertising. Although in developed countries such as Belgium, Ireland and the United Kingdom, these codes are generally observed, their effectiveness as a preventive strategy is often undercut by the vagueness of their stipulations. Elsewhere, as in Zimbabwe or in markets in transition such as the Czech Republic, voluntary codes are less likely to be well-enforced.

In addition to restrictions on advertising of alcoholic beverages, some countries have also banned other forms of promotional activity. The most common forum where such bans may be found is in the area of sport. Mauritius and Norway both ban sponsorship of sporting events by alcoholic beverage companies, while France includes such a prescription in its package of restrictions on alcohol promotion.

Table 30. Examples of countries with restrictions on alcohol advertising

COUNTRY	RESTRICTION
Belarus	Broadcast advertising of all three types of alcoholic beverages restricted, but visible on foreign channels.
Brazil	Broadcast advertising of beverages in excess of 13 per cent alcohol by volume banned between 06:00 - 21:00 hours
Bulgaria	Broadcast, newspaper/magazine, cinema advertising banned.
Canada	Content restrictions.
Cook Islands	Banned on television.
Croatia	Banned on television, radio, in magazines/newspapers, on billboards.
Denmark	Banned on radio, television.
Ecuador	Permitted on television between 20:30 - 04:00 hours; in cinema after 19:00 hours
Egypt	All forms banned.
Estonia	Banned on radio, television, but beer advertises on television.
Finland	Advertising of beverages with 22 or more per cent alcohol by volume banned.
France	Banned on television, in cinemas; restricted to adult press in newspapers, magazines. Health warning required.
Honduras	Content restrictions.
Iceland	Banned on television, radio, billboards; in newspapers/magazines, cinemas.
India	Banned in print or electronic media or on billboards. Permitted at sporting events, also visible on channels from neighbouring countries.
Lithuania	Spirits and wine advertising banned in media.
Malaysia	Banned on broadcast media, on billboards except in east Malaysian state of Sabah.
Mexico	Warning label required on advertisements.
Netherlands Antilles	Permitted on television only between 22:00 - 01:00 hours.
New Zealand	Alcohol brand advertising permitted on television between 21:00 hours - 0600 hours. Content restrictions.

Table 30. Continued

COUNTRY	RESTRICTION
Norway	Banned in all media.
Panama	Content restrictions. Warnings required on advertisements.
Papua New Guinea	Banned in newspapers and other print media. Restricted to licensed premises, officially sanctioned sponsorships of sporting events and teams.
Poland	Banned.
Portugal	Permitted between 21:30 – 07:00 hours on broadcast media. Not permitted on billboards, in cinemas, in schools. Content restrictions.
Russian Federation	Banned.
Slovenia	Banned on television, radio, billboards; in newspapers/magazines, cinemas.
South Africa	Content restrictions.
Spain	Advertising of beverages with alcohol content greater than 20% banned on television radio. Advertising of weaker beverages permitted only after 21:30 hours.
Sweden	Banned except for advertising of light beer; permitted in trade magazines.
Switzerland	Advertising beer on television, radio, and billboards banned except billboards in certain villages. Wine and spirits advertising banned on television. Spirits advertising restricted in magazines/newspapers, cinemas, on billboards.
Thailand	Banned on television.
Turkey	Banned on national broadcasting. Beer advertisements permitted on private broadcasting, (as well as wine) prohibited on billboards.
Ukraine	Banned on television, radio, in press aimed at young people.
United Kingdom	Banned on television between 16:00-18:00 hours, except on bank holidays and weekends; between religious programmes; before, during or after children’s programmes.
United States of America	Content restrictions.
Venezuela	Banned on television and radio.

Deterrent policies

Even more prevalent than restrictions on alcohol availability, price or promotion in the past two decades have been a variety of policies designed to deter drinkers from harming others after drinking. The most common behavioural target of such measures has been drink-driving. Policy tools have included mandatory graduated sentencing laws, mandating combinations of treatment, incarceration and forfeit of property and privileges that escalate based on the number of convictions for driving while intoxicated; and the setting of *per se* limits defining drunkenness by the amount of alcohol present in the bloodstream (BAC), and permitting sanctions to be applied upon determination of drunkenness through breath or blood-testing. Sanctions based on such a standard prove easier to uphold in the face of legal challenges than earlier attempts to establish drunkenness based on behavioural testing or outward physical signs.

Research has determined that sanctions that are swift and certain have the most likelihood of influencing behaviour (Ross, 1982). This is particularly important in the case of actions like drunk driving, where the ratio of infractions to apprehensions may be very high, causing complacency among drinkers. In this light, some countries have granted authorities permission to administer breath tests randomly by the side of the road, and to issue sanctions such as removal of permission to drive administratively on the spot. Research in the US has found this to be an effective strategy (Johnson & Walz, 1994).

Table 31. Countries with blood alcohol concentration (BAC) limits for drivers

COUNTRY	BAC LIMIT (G%)	COMMENTS ON LIMITS
Australia	0.05	0.0 g% for drivers of heavy, dangerous goods, public transport vehicles; learners and drivers under 25 years of age for first three years of driving.
Austria	0.08	-
Azerbaijan	0.0	-
Belarus	0.04	-
Belgium	0.04	-
Brazil	0.08	-
Bulgaria	0.05	-
Canada	0.08	In most provinces there is at least temporary loss of licence at 0.05 g%.
Croatia	0.05	0.0 g% for professional drivers.
Czech Republic	0.0	-
Denmark	0.08	-
Estonia	0.05	-
Fiji	0.08	-
Finland	0.05	-
France	0.07	Over 0.07 g% considered a contravention, receives a fine. Over 0.08 g% considered an offence.
Georgia	0.0	-
Germany	0.08	-
Greece	0.08	-
Hungary	0.0	-
Iceland	0.05	-
India	0.10	-
Ireland	0.08	-
Israel	0.05	-
Italy	0.08	-
Kyrgyzstan	0.0	-
Lithuania	0.04	-
Luxembourg	0.08	-
Malaysia	0.08	-
Mauritius	0.08	-
Netherlands	0.05	-
New Zealand	0.08	0.03 g% for those under 20 years of age.
Norway	0.05	-
Palau	0.10	-
Peru	0.06	Between 0.06 g% and 0.10 g% receives a misdemeanour; 0.10 g% and above receives a much higher fine.
Poland	0.03	-
Portugal	0.05	-
Republic of Moldova	0.03	-
Romania	0.0	-
Russian Federation	0.10	-
Singapore	0.08	-
Slovakia	0.0	-
Slovenia	0.05	0.0 g% for professional drivers.
South Africa	0.05	-
Spain	0.08	0.05 g% for drivers of vehicles more than 3500 kg; 0.03 g% for public service drivers, drivers of dangerous merchandise, emergency services, schoolchildren, minors, special services.
Swaziland	0.15	-

Table 31. Continued

COUNTRY	BAC LIMIT (G%)	COMMENTS ON LIMITS
Sweden	0.02	-
Switzerland	0.08	-
The Former Yugoslav Republic of Macedonia	0.05	0.0 g% for professional drivers.
Turkey	0.05	-
Turkmenistan	0.03	-
Ukraine	0.0	-
United Kingdom	0.08	-
United States of America	0.08-0.10	State option: 17 states have 0.08 g% ; 33 have 0.10 g%.
Zimbabwe	0.08	-

At least 54 countries have established permissible levels for blood alcohol when driving (Table 29). Although eight countries (mostly located in Central and Eastern Europe) have dictated that no amount of alcohol is permissible in the blood when driving, the most common upper limit is either 0.05 g% (14 countries) or 0.08 g% (18 countries). Some countries have permitted local or regional authorities to set limits. For instance, in the United States 17 states have adopted a standard of 0.08 g% while the remainder adhere to a limit of 0.10 g%. Some American states have lowered permissible BACs for younger drivers to between 0.0 g% and 0.05 g% in an effort to reduce the involvement of young drivers in alcohol-related motor vehicle crashes. Elsewhere, as in Spain, different limits are set depending on the type of vehicle driven. Spanish public service drivers are permitted no more than 0.03 g%, drivers of vehicles weighing more than 3500 kg must remain below 0.05 g%, while the general public may range up to 0.08 g%.

The effectiveness of such measures depends heavily on the level of enforcement. In developed countries, where breathalyser technology is readily available and affordable, equipping teams of police to do routine or random roadside testing increases the preventive power of the law. In developing countries, however, the gap between legislation and implementation may be greater. Zimbabwe set a legal limit for BAC at 0.08 g%, but as of January 1995, each of Zimbabwe's eight provinces had only one, non-portable breathalyzer (Jernigan, 1997).

Treatment strategies

Treatment of alcohol-related problems, including dependence, is a strategy typically targeted to the individual and not to the large population. In many countries, a wide variety of treatments exist, voluntary and compulsory, ranging from hospital-based clinics, psychiatric hospitals, outpatient treatment, integrated in primary health care, community-based approaches, self-help groups, and traditional healers, among many others. Some developed countries have organized treatment systems for alcohol problems, which are integrated and can cover a broad range of problems. Very few countries have systematically evaluated various forms of treatment and the resources allocated for treatment are often very scarce, if existent. It can be said that globally, access to affordable and effective treatment is still largely inadequate in the majority of countries.

Brief interventions have proven to be cost-effective for those with early problems related to alcohol. It is possible that these interventions, if widely disseminated in a variety of clinical and community settings, would have an impact on the aggregate levels of problems in a given society as well, but this remains an open question for future research.

Conclusion

Alcohol consumption is declining in most of the developed countries, and rising in many of the developing countries and the countries of Central and Eastern Europe. Males do most of the drinking in these countries, and evidence available regarding patterns of drinking suggests that large amounts of heavy drinking are occurring. Alcohol's contribution to the global burden of disease is significant and growing in some regions, to the point that in parts of Central and Eastern Europe, alcohol use is contributing to an unprecedented decline in male life expectancy. While there is much that remains to be learned about alcohol use and problems around the world, the evidence displayed in these pages is sufficient to suggest that alcohol is a significant threat to world health.

On the supply side, while production of various forms of alcohol for domestic consumption is widespread, production for export is concentrated in few of the mostly developed countries, and in the case of beer and distilled spirits, in the hands of a shrinking number of large global corporations. These corporations spend heavily on marketing designed to stimulate demand for alcoholic beverages. They employ sophisticated technologies to integrate their products into new markets. In many of these new markets, alcohol is recognized for its revenue-generating potential, but the substantial costs of alcohol-related problems are uncounted. The most commonly used alcohol policies seek to limit alcohol-related harm, but public health-oriented technologies to reduce demand are far more prevalent in developed than developing countries, and are in danger of being swept aside by free market reforms.

In keeping with resolutions passed by the World Health Assembly, WHO encourages its Member States to improve their monitoring of alcohol consumption and problems. A forthcoming publication from WHO/SAB will recommend standardized methodologies to improve data collection and comparability (WHO, in press). Adoption of such methodologies, along with increased monitoring of alcohol use and problems at the national level, will increase the accuracy and comprehensiveness of future editions of the Global Status Report.

WHO Member States also need to adopt comprehensive national programmes to prevent alcohol-related problems. Approaches to alcohol must be consistent with local cultures and mores. Each country must develop its own unique mix of strategies. There is substantial evidence that the serious harms from alcohol use experienced by millions of people, drinkers and non-drinkers, across the globe are not inevitable. As the country profiles in this document demonstrate, numerous strategies are being used to prevent and contain alcohol-related problems. These technologies exist, and in many cases their efficacy has been scientifically demonstrated. Increased attention to alcohol and a commitment to implementing comprehensive programmes of education, treatment and regulation will help to reduce and avert an epidemic of alcohol-related disability, disease and death worldwide.

PART II

Country Profiles

African Region

Algeria

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	18 740 000	24 935 000	27 939 000
Adult (15+)	10 027 000	14 465 000	17 125 000
% Urban	43.4	51.7	55.8
% Rural	56.6	48.3	44.2

Health status

Life expectancy at birth, 1990-1995 : 66 (males), 68.3 (females)

Infant mortality rate in 1990-1995 : 55 per 1000 live births

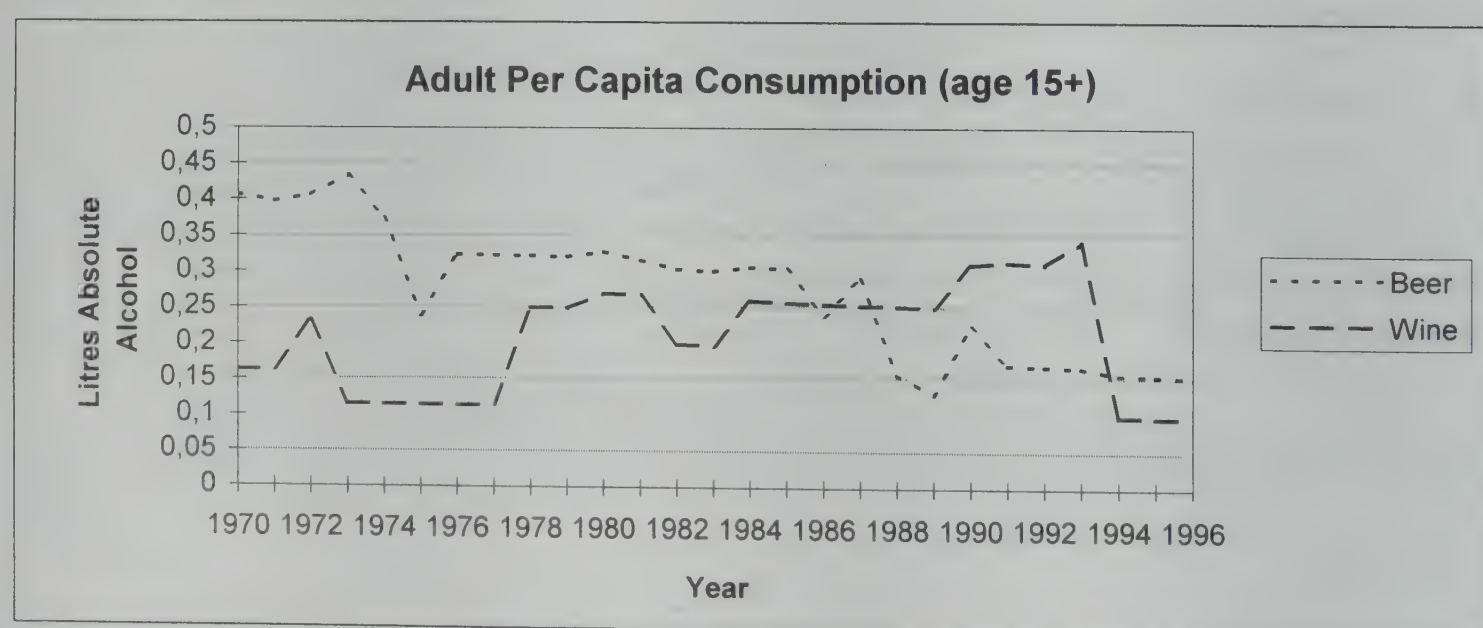
Socioeconomic situation

GNP per capita (US\$), 1995: 1600, PPP estimates of GNP per capita (current int'l \$), 1995: 5300.

Average distribution of labour force by sector, 1990-1992 : agriculture 18%; industry 33%; services 49%

Adult literacy rate (per cent), 1995 : total 62; male 74; female 49

Alcohol consumption and prevalence



Consumption

Consumption of alcohol in Algeria decreased significantly between 1970 and 1990. Beer production has levelled off since 1990 at a low level. Wine was the leading beverage in terms of production, consumption and export. According to official statistics, wine production has declined dramatically, and wine exports even more so. This trend can be expected to continue given the strong religious and cultural influence of Islam in Algeria.

Angola

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 993 000	9 194 000	11 072 000
Adult (15+)	3 876 000	4 861 000	5 853 000
% Urban	21.0	28.3	32.2
% Rural	79.0	71.7	67.8

Health status

Life expectancy at birth, 1990-1995 : 44.9 (males), 48.1 (females)

Infant mortality rate in 1990-1995 : 124 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 410, PPP estimates of GNP per capita (current int'l \$), 1995: 1310.

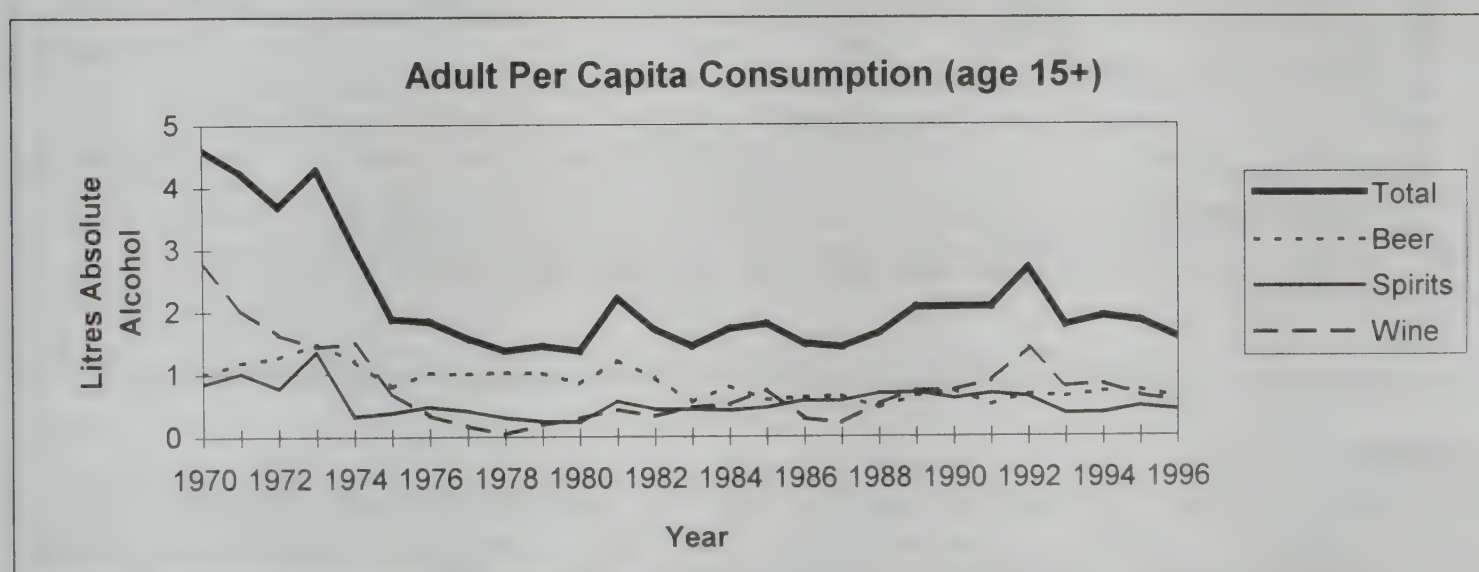
Average distribution of labour force by sector, 1990-1992 : agriculture 73%; industry 10%; services 17%

Adult literacy rate (per cent), 1995 : total 43; male 57; female 29

Alcohol production, trade and industry

Angola produces beer and distilled spirits. South African Breweries is rehabilitating a brewery in Lubango.

Alcohol consumption and prevalence



Consumption

There is substantial home brewing of beer in Angola, but figures are not available and therefore not included in the graph above. Wine is entirely imported, and fluctuations in wine consumption probably reflect disruptions in foreign trade in general. Nearly as much beer is imported as is produced domestically. In recent years, adult consumption of all three types of alcoholic beverages has converged.

Benin

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 459 000	4 633 000	5 409 000
Adult (15+)	1 881 000	2 467 000	2 843 000
% Urban	24.9	29.0	31.3
% Rural	75.1	71.0	68.7

Health status

Life expectancy at birth, 1990-1995 : 45.9 (males), 49.3 (females)

Infant mortality rate in 1990-1995 : 86 per 1000 live births

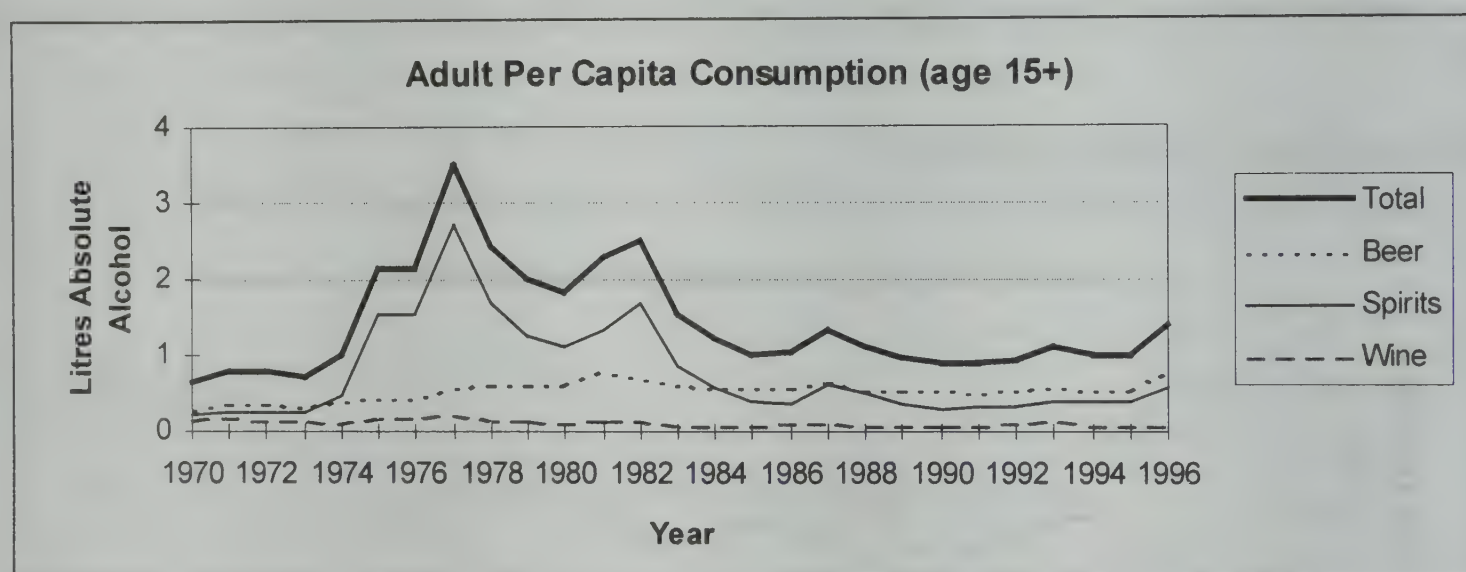
Socioeconomic situation

GNP per capita (US\$), 1995: 370, PPP estimates of GNP per capita (current int'l \$), 1995: 1760.

Average distribution of labour force by sector, 1990-1992 : agriculture 70%; industry 7%; services 23%

Adult literacy rate (per cent), 1995 : total 37; male 49; female 26

Alcohol consumption and prevalence



Consumption

Recorded adult consumption of alcohol peaked in 1977 but has declined since that time. The recorded beverage of choice is distilled spirits, which are imported. There is no information available on consumption of smuggled or informally- or home-produced alcoholic beverages.

Botswana

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	906 000	1 276 000	1 487 000
Adult (15+)	466 000	701 000	843 000
% Urban	15.1	23.1	28.1
% Rural	84.9	76.9	71.9

Health status

Life expectancy at birth, 1990-1995 : 63 (males), 66.7 (females)

Infant mortality rate in 1990-1995 : 43 per 1000 live births

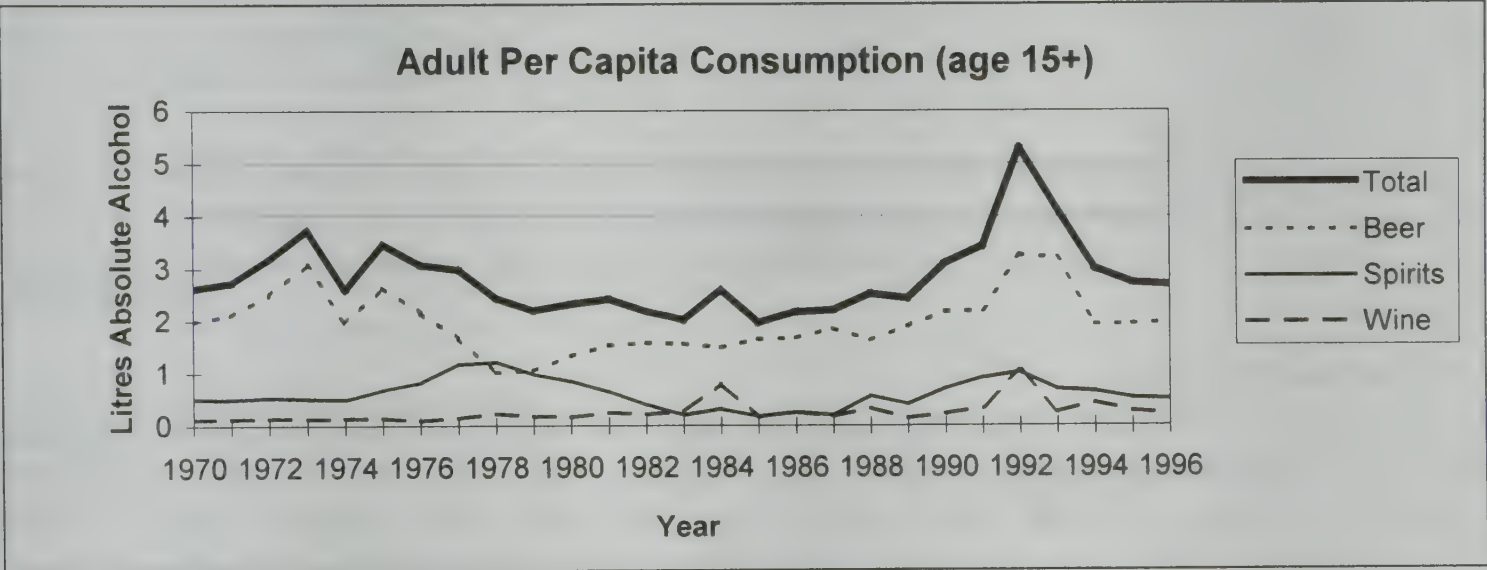
Socioeconomic situation

GNP per capita (US\$), 1995: 3020, PPP estimates of GNP per capita (current int'l \$), 1995: 5580.
Average distribution of labour force by sector, 1990-1992 : agriculture 28%; industry 11%; services 61%
Adult literacy rate (per cent), 1995 : total 70; male 81; female 60

Alcohol production, trade and industry

South African Breweries owns the Kgalagadi Brewery. The government's Botswana Development Corporation owns a majority share in Botswana Breweries, which has production facilities in Gaborone, Francistown, Maun and Lobatse. South African Breweries owns 40 per cent of Botswana Breweries, and manages the company for the government.

Alcohol consumption and prevalence



Consumption

Recorded beer production peaked in 1992 and 1993, as a result of an increase in beer imports. An estimated 20 to 30 per cent of rural households are regularly involved in brewing traditional beers, and at least 90 per cent of these brews are produced for sale. However, smuggled or home or informal consumption and production is probably not reflected in the above graph.

Prevalence

A 1986 survey sampled a diverse array of workplaces nationwide, and drew a stratified sample by occupational category within each workplace. Half the respondents reported that they drank alcoholic beverages, and more males than females reported current alcohol-drinking. The survey evidence indicated that only a small number of the employed drinkers could be classified as problem drinkers, but this conclusion was viewed as unconvincing by the interviewers, given the high degree of reluctance on the part of the respondents, and what was estimated to be substantial under-reporting of alcohol-related problems.

Mortality, morbidity, health and social problems from alcohol use

Motor Vehicle Crash Morbidity and Mortality

	1982	1983	1984	1985
Total Motor Vehicle Crashes	2648	2893	3300	3521
Alcohol-Related Crashes	214	237	350	402
Total Persons Killed	130	176	168	198
Alcohol-Related Deaths	13	11	13	28
Total Persons Injured	406	329	520	698
Alcohol-Related Injuries	26	36	42	51

Mortality

Between 1979 and 1984 recorded total deaths from chronic liver disease dropped from 42 to 25.

Morbidity

The number of inpatients with chronic liver disease rose from 124 to 184 between 1980 and 1984. Inpatients admitted to psychiatric units because of alcohol psychosis increased from 91 to 106 between 1980 and 1984, and outpatients admitted to the same units for alcohol dependence syndrome rose from 112 to 334 during the same period. Data from Lobatse Mental Hospital, Botswana's only national mental hospital, indicate that in 1994, 152 admissions for alcohol-related problems accounted for 18 per cent of total admissions, while 241 alcohol-related outpatient attendences made up seven per cent of total outpatient attendences. Patients with alcohol-related problems were noted to make little use of outpatient clinics, seeking help mainly at very advanced states when inpatient care was inevitable. Males were responsible for 80 per cent of all admissions and 76 per cent of all outpatient attendences for alcohol-related disorders.

At outpatient clinics run by the Princess Marina Psychiatric Unit in Gaborone and in the Kgatleng and south-east districts, alcohol-related problems accounted for five per cent, four per cent and six per cent respectively of attendees at the clinics.

Alcohol policies

Control of alcohol products

Hours of alcohol sales and service are limited. Bottle stores conduct business between 10:00 and 19:00 hours and close on Sundays. On-premises drinking establishments are open from 10:00 to 23:00 hours from Monday to Thursday, and until midnight on Friday and Saturday. On Sundays, they must close at 22:00 hours.

Control of alcohol problems

In 1985 the Minister of Health urged that "a link between the health services and places of work must be established." The Occupational Health Unity (OHU) in the Ministry of Health has fostered this relationship. A team of health care workers from the OHU pays regular visits to economic establishments in both rural and urban areas. The OHU works closely with the Health Education Unit, the Department of Broadcasting and Information, the Botswana Employers Federation and the Botswana Federation of Trade Unions to arrange seminars and other education concerning alcohol and other drug abuse.

Burkina Faso

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 957 000	8 987 000	10 319 000
Adult (15+)	3 903 000	5 025 000	5 686 000
% Urban	8.5	17.9	27.2
% Rural	91.5	82.2	72.8

Health status

Life expectancy at birth, 1990-1995 : 45.8 (males), 49 (females)

Infant mortality rate in 1990-1995 : 130 per 1000 live births

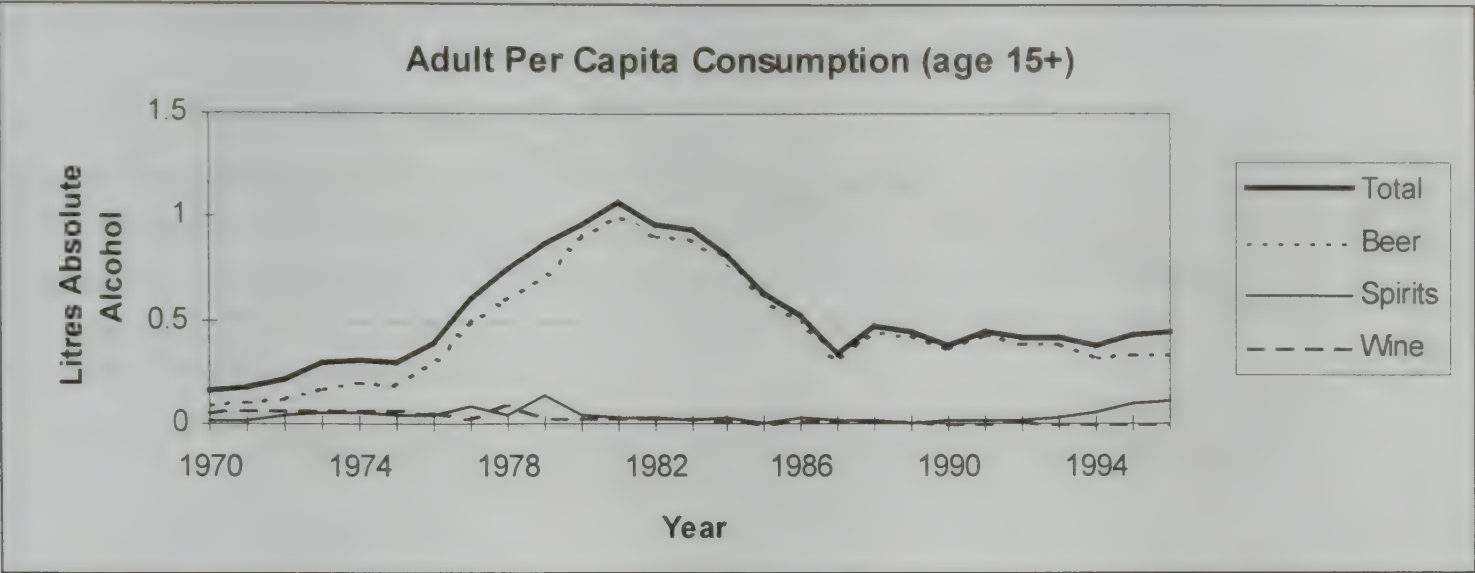
Socioeconomic situation

GNP per capita (US\$), 1995: 230, PPP estimates of GNP per capita (current int'l \$), 1995: 780.

Average distribution of labour force by sector, 1990-1992 : agriculture 87%; industry 4%; services 9%

Adult literacy rate (per cent), 1995 : total 19; male 29; female 9

Alcohol consumption and prevalence



Consumption

Rising consumption of beer fuelled an increase in overall alcohol consumption in the 1970s. However, beer consumption decreased from 1981, and by 1990 had nearly returned to its 1976 level. There is no information available on the amount of smuggled or informally- or home-produced alcohol consumed.

Burundi

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 130 000	5 503 000	6 393 000
Adult (15+)	2 282 000	2 998 000	3 436 000
% Urban	4.3	6.3	7.5
% Rural	95.7	93.7	92.5

Health status

Life expectancy at birth, 1990-1995 : 48.4 (males), 51.9 (females)
Infant mortality rate in 1990-1995 : 102 per 1000 live births

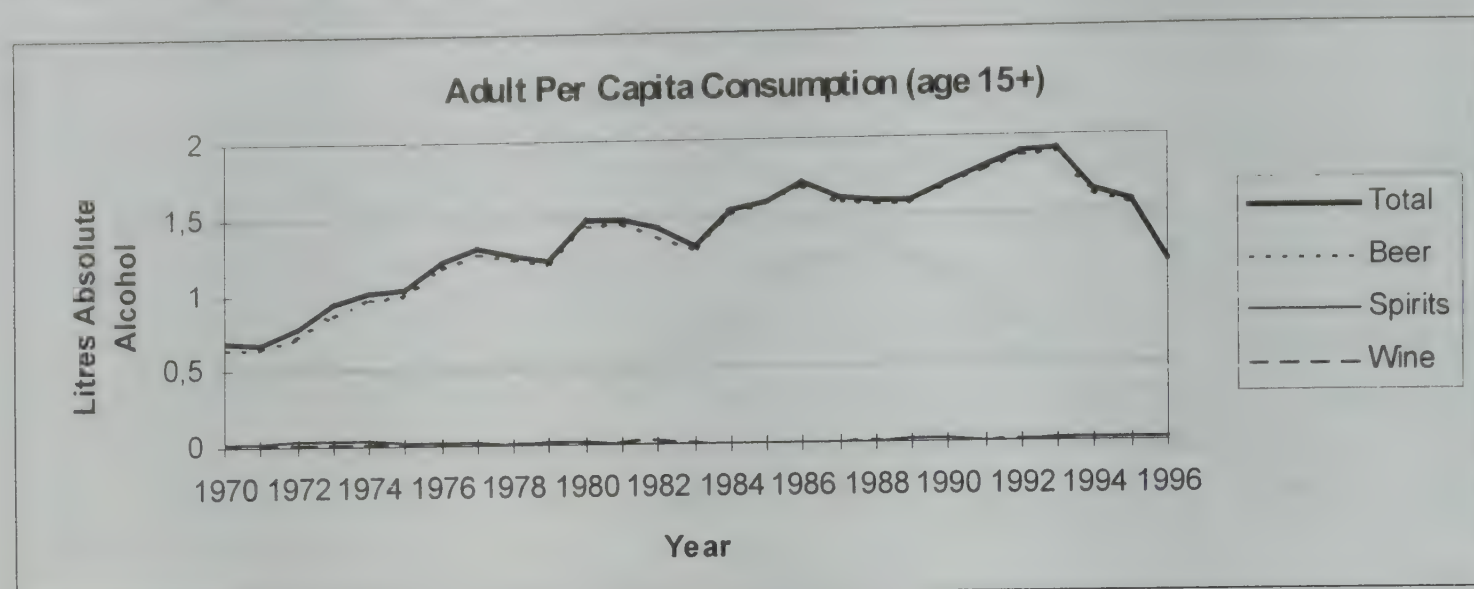
Socioeconomic situation

GNP per capita (US\$), 1995: 160, PPP estimates of GNP per capita (current int'l \$), 1995: 630.
Average distribution of labour force by sector, 1990-1992 : agriculture 92%; industry 2%; services 6%
Adult literacy rate (per cent), 1995 : total 35; male 49; female 22

Alcohol production, trade and industry

Heineken NV owns 60 per cent of the Brarudi Brewery.

Alcohol consumption and prevalence



Consumption

Industrial production of clear beer rose steadily in Burundi from 1970 until 1993. During the late 1990s recorded consumption declined. There are no data available regarding consumption of smuggled or informal or home produced alcohol.

Economic impact of alcohol

The Brarudi Brewery is Burundi's largest source of tax revenue, providing 27 per cent of the government's income in 1995, and 40 per cent in 1996.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

A 1993 study looked at pancreatic juice composition in 29 people. The study found that chronic pancreatitis was associated with a high alcohol consumption.

Alcohol policies

Alcohol data collection, research and treatment

A local chapter of the International Organisation of Good Templars, a primarily Scandinavia-based global temperance organization, offers seminars and provides community education on alcohol and other drugs.

Cameroon

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 665 000	11 526 000	13 233 000
Adult (15+)	4 814 000	6 377 000	7 409 000
% Urban	31.4	40.3	44.9
% Rural	68.6	59.7	55.1

Health status

Life expectancy at birth, 1990-1995 : 54.5 (males), 57.5 (females)

Infant mortality rate in 1990-1995 : 63 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 650, PPP estimates of GNP per capita (current int'l \$), 1995: 2110.

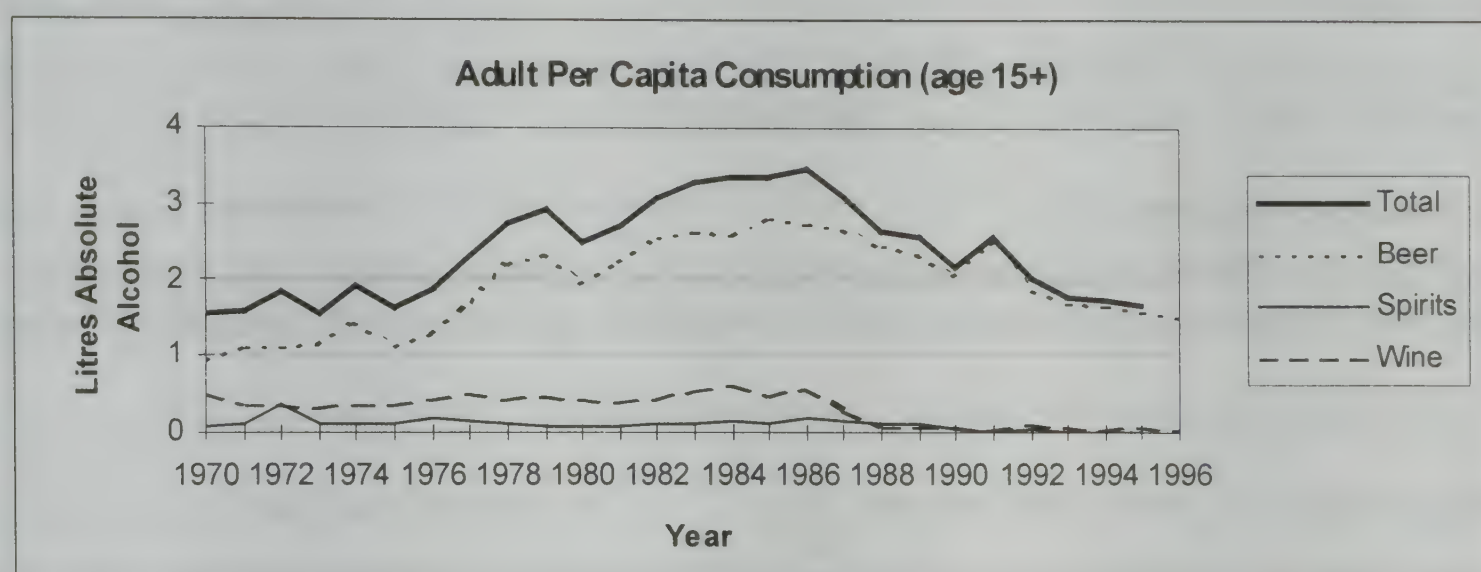
Average distribution of labour force by sector, 1990-1992 : agriculture 79%; industry 7%; services 14%

Adult literacy rate (per cent), 1995 : total 63; male 75; female 52

Alcohol production, trade and industry

Cameroon has a thriving brewing industry. Leading breweries include Union of Cameroon Breweries, International Breweries, NOBRA and Guinness Cameroon S.A. The latter, a fully-owned subsidiary of Guinness PLC, is highly visible due to its frequent sponsorship of sporting events.

Alcohol consumption and prevalence



Consumption

Beer consumption in Cameroon grew steadily through 1986, but declined substantially thereafter. All recorded consumption of wine and spirits comes from imported beverages. Imports in both categories decreased substantially in 1988. There is no information available on consumption of smuggled or home- or informally-produced alcohol.

Prevalence

Imputed consumption figures such as those given above do not correspond with interview data on drinking patterns. A 1990 study of drinking in three areas, two rural and one urban, interviewed 602 persons. Of these, 60 per cent reported drinking alcohol regularly and 70 per cent reported drinking on feast days. The entire sample averaged 58 grams of alcohol per day, while regular drinkers averaged 78 grams of alcohol per day. Illiterate males were most likely to drink heavily and often. Spirits and mixed drinks were the most common beverages consumed.

Economic impact of alcohol

In 1990, 42 per cent of national tax revenues came from locally produced beer and soft drinks.

Alcohol policies

Control of alcohol products

There was a 180 per cent import tax on alcoholic beverages as of the 1989-1990 fiscal year. Retail sales of alcohol are controlled through licences issued by divisional officers of the government.

Control of alcohol problems

The Cameroon Association for the Prevention of Alcoholism and Drug Addiction is a non-governmental organization involved in prevention and public education, as well as lobbying for preventive alcohol and other drug policies.

Cape Verde

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	289 000	341 000	392 000
Adult (15+)	157 000	191 000	227 000
% Urban	23.5	44.2	54.3
% Rural	76.5	55.8	45.7

Health status

Life expectancy at birth, 1990-1995 : 63.5 (males), 65.5 (females)

Infant mortality rate in 1990-1995 : 50 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 960, PPP estimates of GNP per capita (current int'l \$), 1995: 1870.

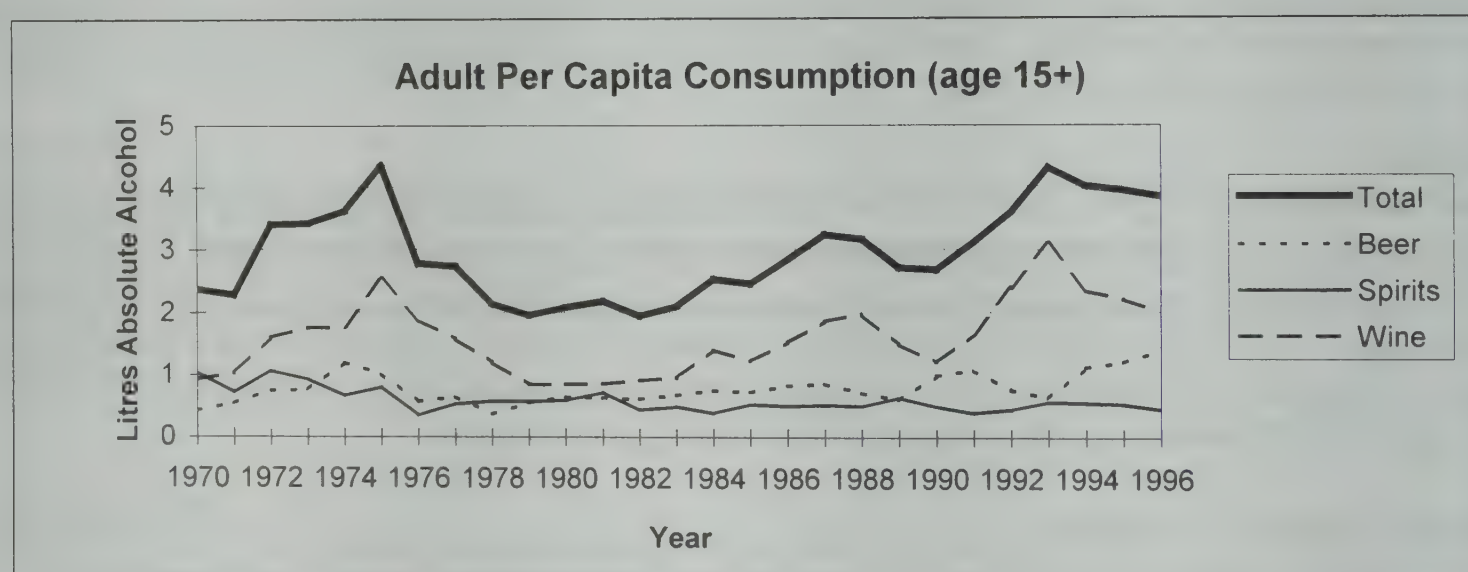
Average distribution of labour force by sector, 1990-1992 : agriculture 31%; industry 6%; services 63%

Adult literacy rate (per cent), 1995 : total 72; male 81; female 64

Alcohol production, trade and industry

Domestic production of beer began in 1988, and rapidly supplanted imports as the principal source of recorded beer production.

Alcohol consumption and prevalence



Consumption

Wine, the alcoholic beverage of choice, comes entirely from imports. The domestic spirits industry has produced a steady small supply since 1980. There is no information available on consumption of smuggled or home- or informally-produced alcohol

Central African Republic (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 313 000	2 927 000	3 315 000
Adult (15+)	1 348 000	1 677 000	1 900 000
% Urban	35.1	37.5	39.3
% Rural	64.9	62.5	60.8

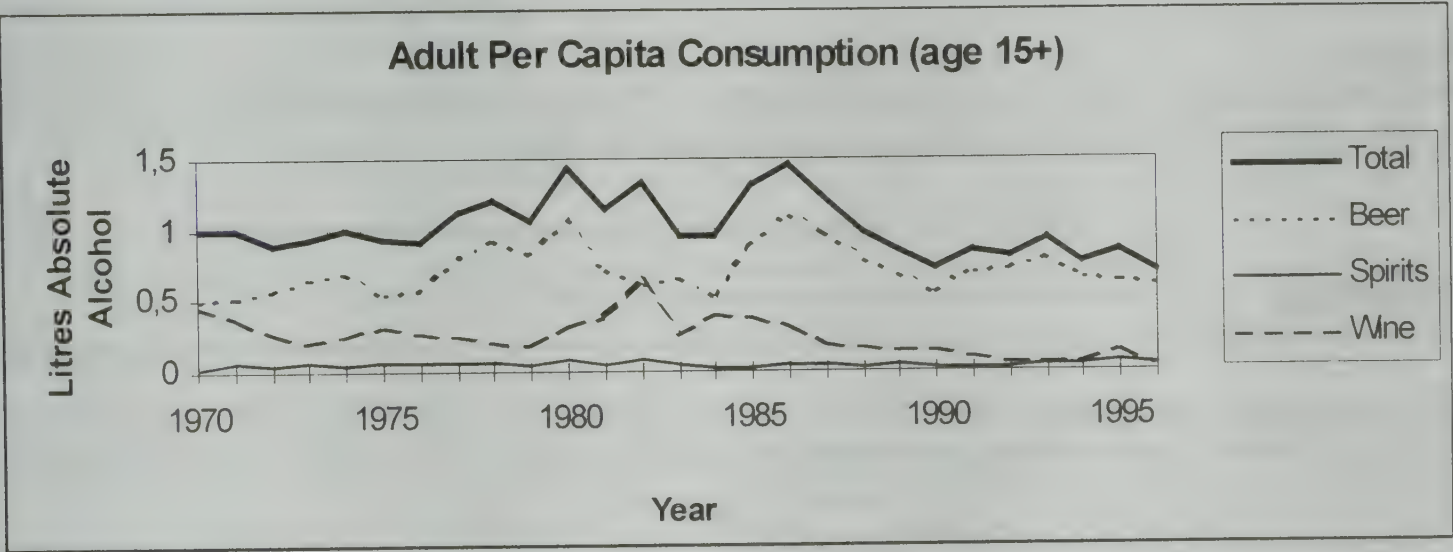
Health status

Life expectancy at birth, 1990-1995 : 46.9 (males), 51.9 (females)
Infant mortality rate in 1990-1995 : 102 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 340, PPP estimates of GNP per capita (current int'l \$), 1995: 1070.
Average distribution of labour force by sector, 1990-1992 : agriculture 81%; industry 3%; services 16%
Adult literacy rate (per cent), 1995 : total 60; male 68; female 52

Alcohol consumption and prevalence



Consumption

Beer is the alcoholic beverage of choice, but recorded consumption has fluctuated substantially, albeit at a low level, in the past 25 years. There is no information available on consumption of smuggled or home- or informally-produced alcohol.

Chad

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 477 000	5 553 000	6 361 000
Adult (15+)	2 600 000	3 149 000	3 600 000
% Urban	18.7	20.5	21.4
% Rural	81.3	79.5	78.6

Health status

Life expectancy at birth, 1990-1995 : 45.9 (males), 49.1 (females)

Infant mortality rate in 1990-1995 : 122 per 1000 live births

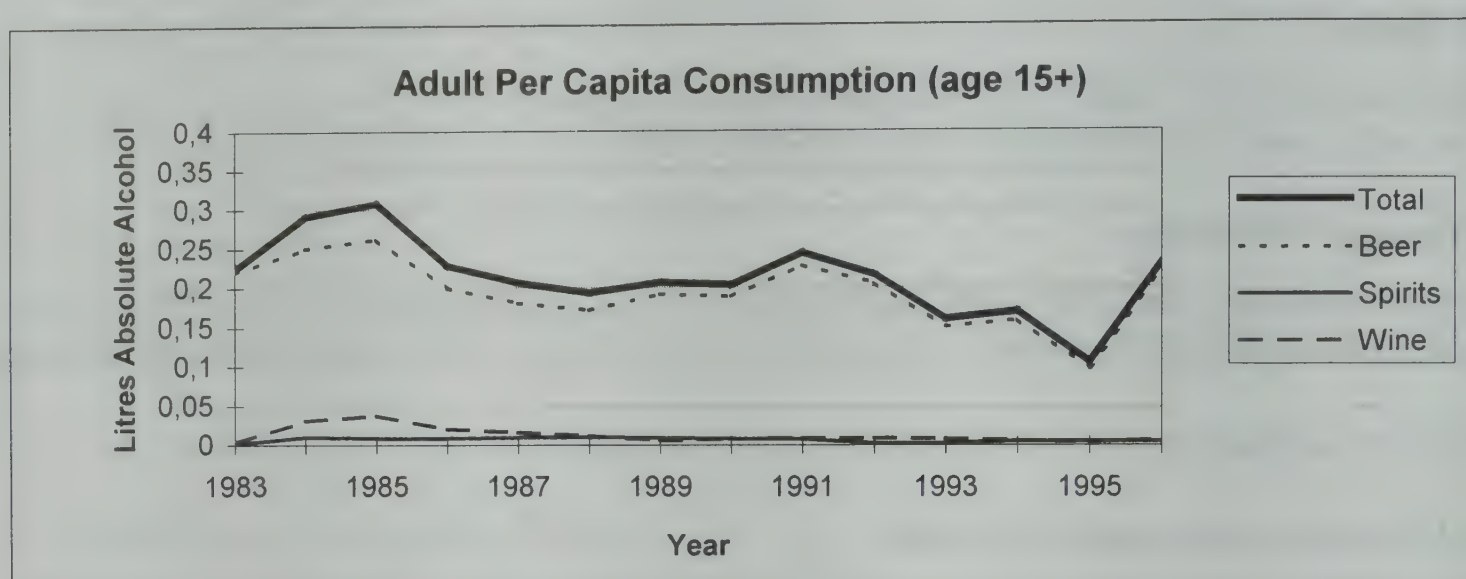
Socioeconomic situation

GNP per capita (US\$), 1995: 180, PPP estimates of GNP per capita (current int'l \$), 1995: 700.

Average distribution of labour force by sector, 1990-1992 : agriculture 83%; industry 5%; services 12%

Adult literacy rate (per cent), 1995 : total 48; male 62; female 35.

Alcohol consumption and prevalence



Consumption

Recorded consumption of alcohol is extremely low. There are no data available on consumption of smuggled or home brewed or other informally-produced alcohol.

Comoros

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	383 000	543 000	653 000
Adult (15+)	199 000	281 000	337 000
% Urban	23.2	27.8	30.7
% Rural	76.8	72.2	69.3

Health status

Life expectancy at birth, 1990-1995 : 55.5 (males), 56.5 (females)

Infant mortality rate in 1990-1995 : 89 per 1000 live births

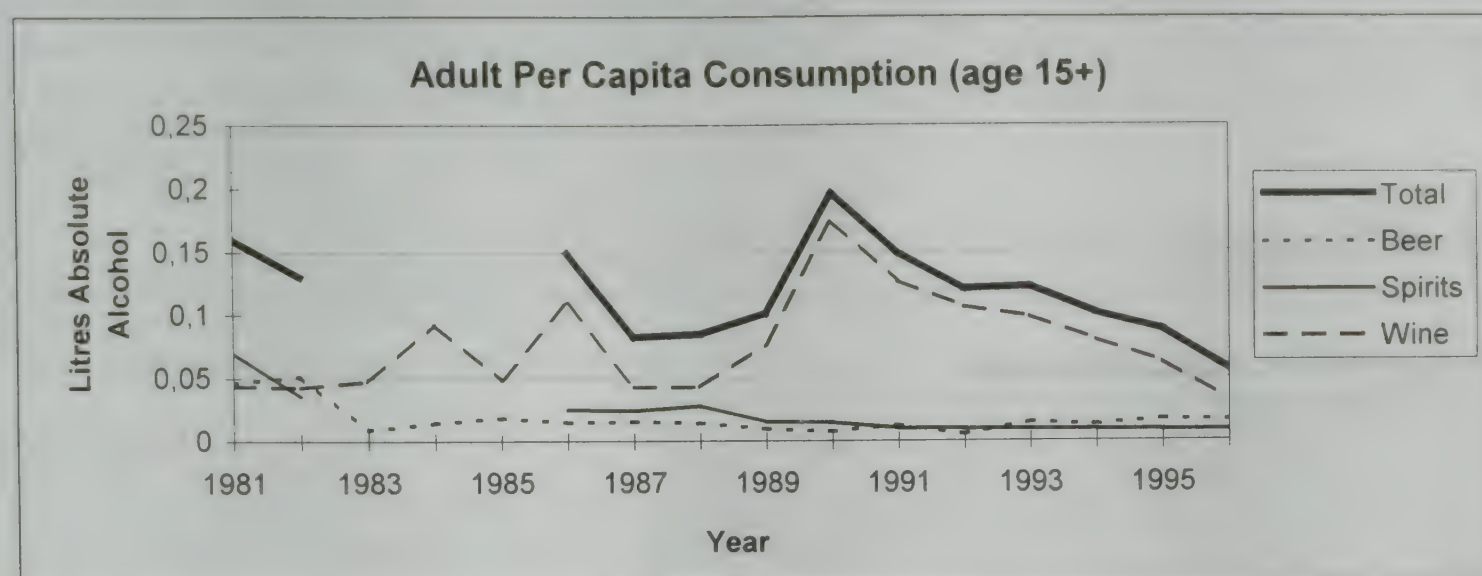
Socioeconomic situation

GNP per capita (US\$), 1995: 470, PPP estimates of GNP per capita (current int'l \$), 1995: 1320.

Average distribution of labour force by sector, 1990-1992 : agriculture 83%; industry 6%; services 11%

Adult literacy rate (per cent), 1995 : total 57; male 64; female 50

Alcohol consumption and prevalence



Consumption

All recorded alcohol consumption comes from imported beverages. Recorded consumption is very low, and comes primarily from wine.

Congo (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 669 000	2 232 000	2 590 000
Adult (15+)	916 000	1 221 000	1 408 000
% Urban	41.0	53.5	58.8
% Rural	59.0	46.5	41.2

Health status

Life expectancy at birth, 1990-1995 : 48.9 (males), 53.8 (females)

Infant mortality rate in 1990-1995 : 84 per 1000 live births

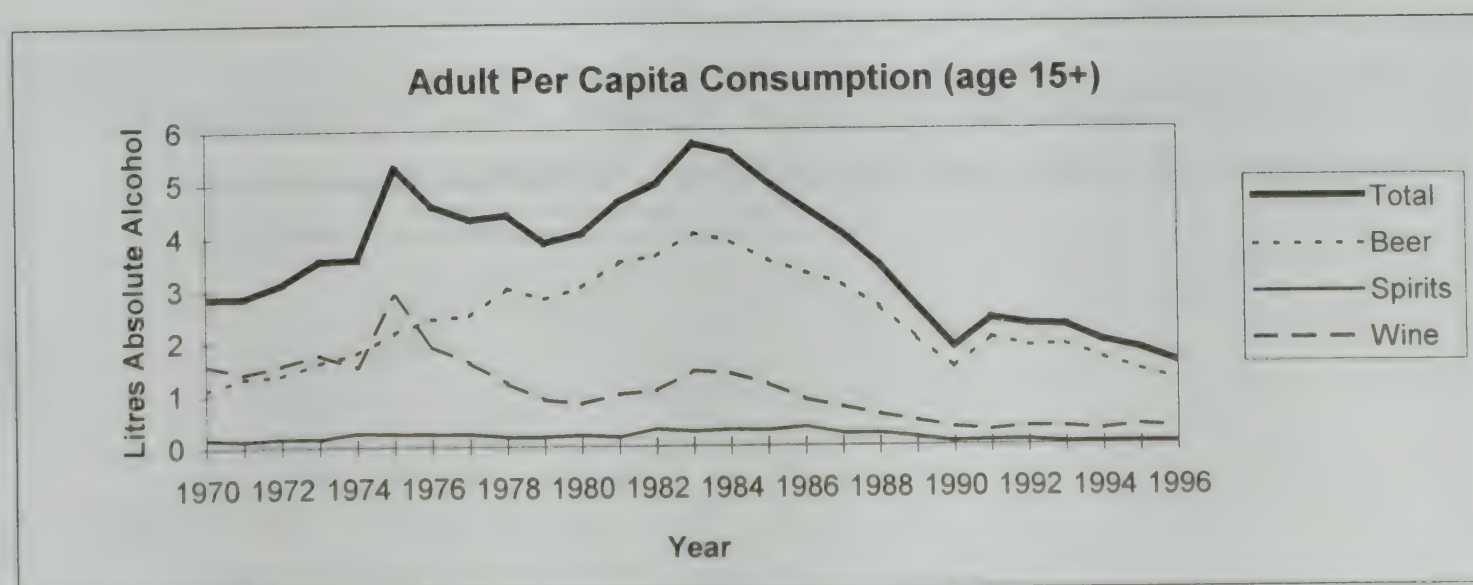
Socioeconomic situation

GNP per capita (US\$), 1995: 680, PPP estimates of GNP per capita (current int'l \$), 1995: 2050.

Average distribution of labour force by sector, 1990-1992 : agriculture 62%; industry 12%; services 26%

Adult literacy rate (per cent), 1995 : total 75; male 83; female 67

Alcohol consumption and prevalence



Consumption

The Congo's beer consumption is primarily from domestic production, but recorded wine and spirits consumption is entirely from imports. There is no information available on consumption of smuggled or home- or informally-produced alcohol.

Côte d'Ivoire

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 194 000	11 974 000	14 253 000
Adult (15+)	4 378 000	6 201 000	7 251 000
% Urban	34.8	40.4	43.6
% Rural	65.2	59.6	56.4

Health status

Life expectancy at birth, 1990-1995 : 49.7 (males), 52.4 (females)

Infant mortality rate in 1990-1995 : 92 per 1000 live births

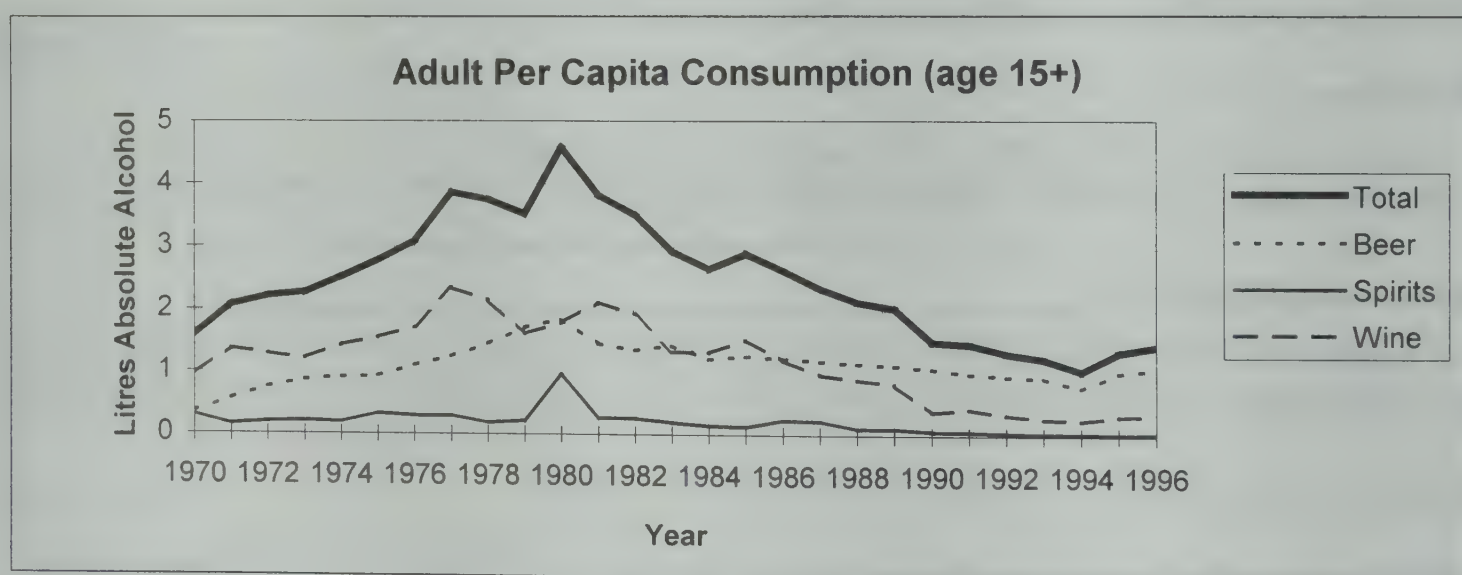
Socioeconomic situation

GNP per capita (US\$), 1995: 660, PPP estimates of GNP per capita (current int'l \$), 1995: 1580.

Average distribution of labour force by sector, 1990-1992 : agriculture 65%; industry 8%; services 27%

Adult literacy rate (per cent), 1995 : total 40; male 50; female 30

Alcohol consumption and prevalence



Consumption

Recorded wine and spirits consumption comes entirely from imported beverages. Recorded beer consumption peaked in 1980, and then fell steadily until 1994. There is no information available on consumption of smuggled or home- or informally-produced alcohol.

The Democratic Republic of The Congo

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	27 009 000	37 436 000	43 901 000
Adult (15+)	14 571 000	19 728 000	22 835 000
% Urban	28.7	28.1	29.1
% Rural	71.3	71.9	70.9

Health status

Life expectancy at birth, 1990-1995 : 50.4 (males), 53.7 (females)

Infant mortality rate in 1990-1995 : 93 per 1000 live births

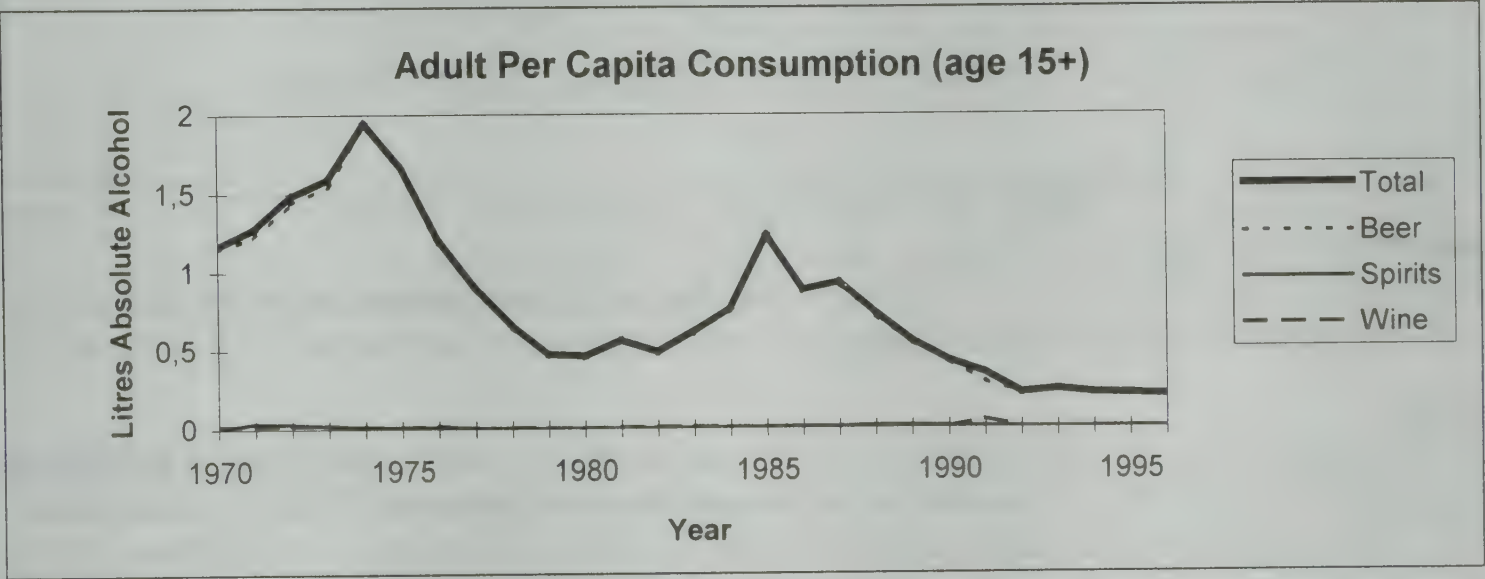
Socioeconomic situation

GNP per capita (US\$), 1995: 120, PPP estimates of GNP per capita (current int'l \$), 1995: 490.

Average distribution of labour force by sector, 1990-1992 : agriculture 71%; industry 13%; services 16%

Adult literacy rate (per cent), 1995 : total 85; male 90; female 80

Alcohol consumption and prevalence



Consumption

There is no information on domestic spirits production after 1973. Recorded beer consumption has fallen fairly steadily over the past decade. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Ethiopia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	36 368 000	47 423 000	55 053 000
Adult (15+)	19 600 000	25 761 000	29 523 000
% Urban	10.5	12.3	13.4
% Rural	89.5	87.7	86.6

Health status

Life expectancy at birth, 1990-1995 : 45.9 (males), 49.1 (females)

Infant mortality rate in 1990-1995 : 119 in 1000 live births

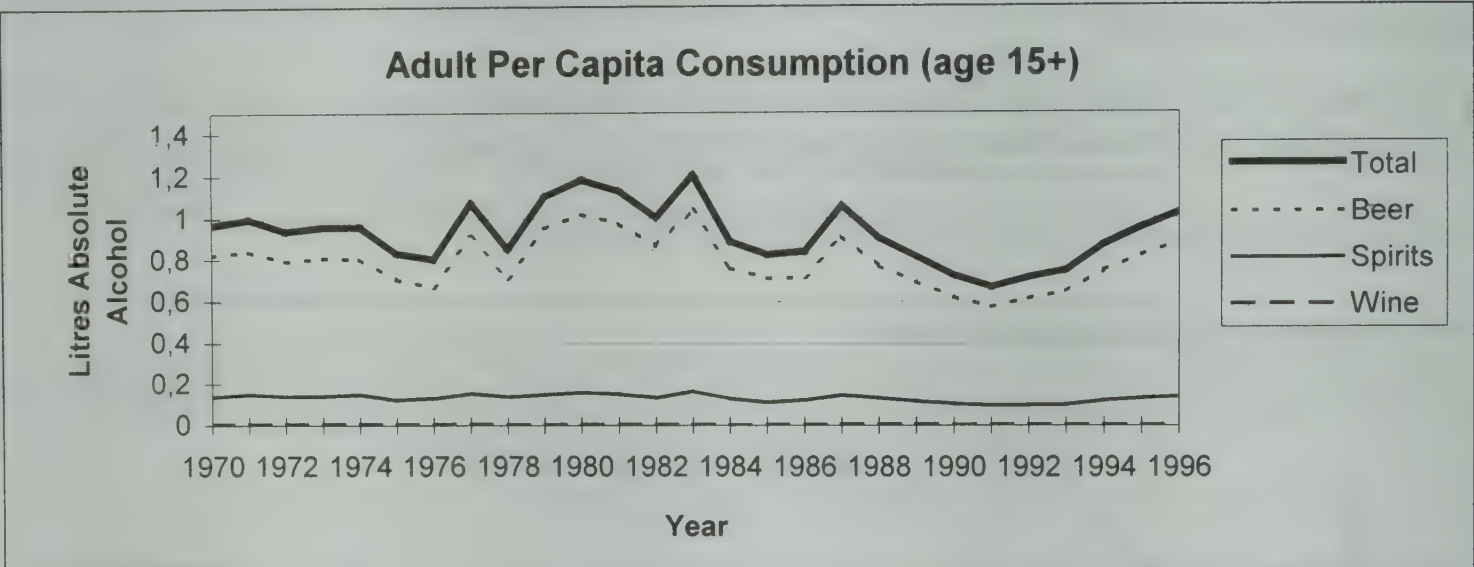
Socioeconomic situation

GNP per capita (US\$), 1995: 100, PPP estimates of GNP per capita (current int'l \$), 1995: 450.
Average distribution of labour force by sector, 1990-1992 : agriculture 88%; industry 2%; services 10%
Adult literacy rate (per cent), 1995 : total 25; male 46; female 25

Alcohol production, trade and industry

Ethiopia produces beer, distilled spirits and wine. South African Breweries is moving forward on plans to construct a US\$ 40 million brewery in Ethiopia.

Alcohol consumption and prevalence



Consumption

Ethiopian alcohol consumption is low by world standards. Alcohol consumption peaked in 1983, and then fell substantially before beer and spirits consumption began to increase slightly in the mid-1990s.

Prevalence

A 1989 survey of 519 high school students in the capital city of Addis Ababa found that 9.2 per cent “consumed alcohol heavily” according to self-reports (no definition of “heavily” was given in the study). The prevalence of current alcohol use among university students in Northwest Ethiopia in 1988 was 31.1 per cent. Alcohol was also frequently used in combination with tobacco and the stimulant *khat*.

Mortality, morbidity, health and social problems from alcohol use

Mortality

A 1993 study of attempted suicides in Ethiopian adolescents in Addis Ababa high schools noted a strong linear relationship between alcohol intake and suicide attempts.

Gabon

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	806 000	1 146 000	1 320 000
Adult (15+)	542 000	727 000	804 000
% Urban	35.8	45.7	50.0
% Rural	64.2	54.3	50.0

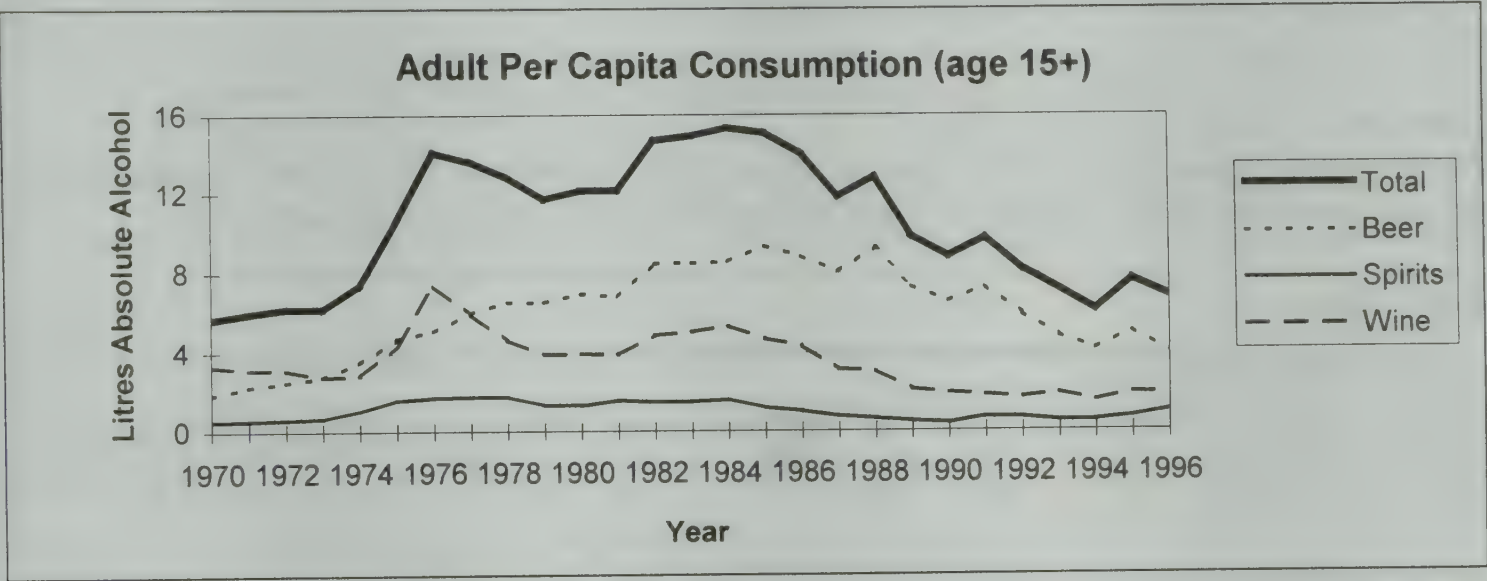
Health status

Life expectancy at birth, 1990-1995 : 51.9 (males), 55.2 (females)
Infant mortality rate in 1990-1995 : 94 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 3490.
Average distribution of labour force by sector, 1990-1992 : agriculture 75%; industry 11%; services 14%
Adult literacy rate (per cent), 1995 : total 63; male 74; female 53

Alcohol consumption and prevalence



Consumption

The bulk of Gabon’s alcohol consumption comes from the country’s recorded domestic beer production. Spirits and wine are imported. There is no information available on consumption of smuggled or home- informally produced alcohol.

Gambia (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	641 000	923 000	1 118 000
Adult (15+)	369 000	533 000	657 000
% Urban	18.2	22.6	25.5
% Rural	81.8	77.3	74.5

Health status

Life expectancy at birth, 1990-1995 : 43.4 (males), 46.6 (females)
Infant mortality rate in 1990-1995 : 132 per 1000 live births

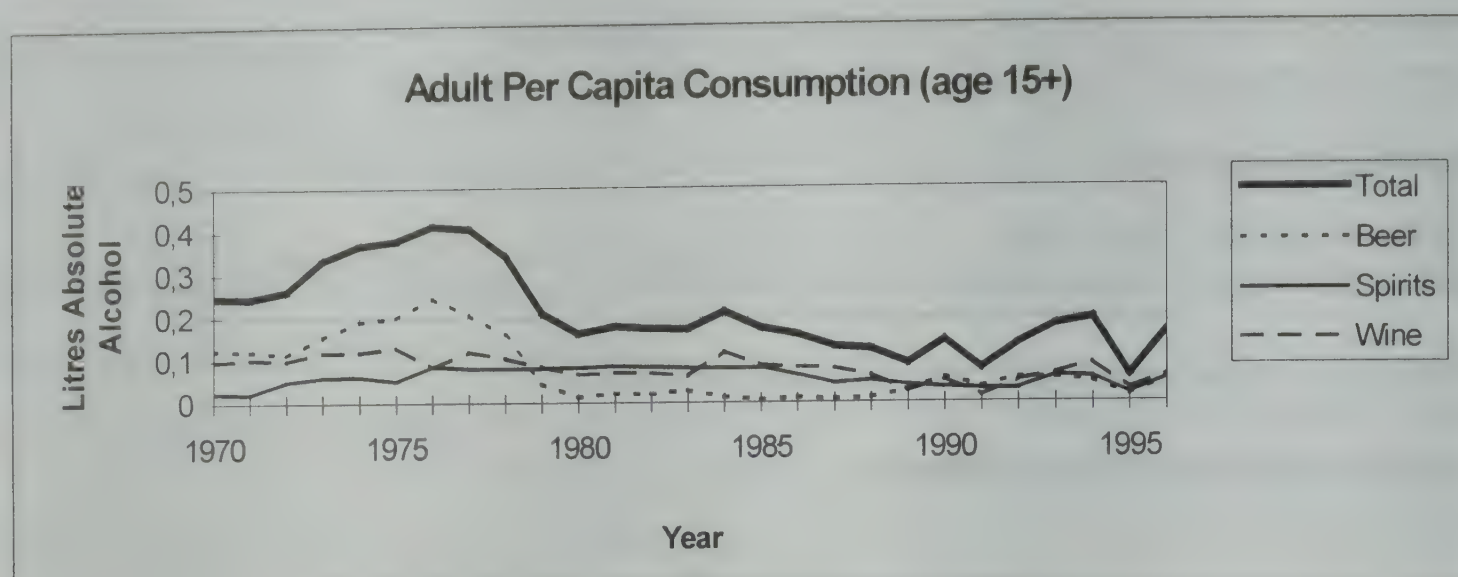
Socioeconomic situation

GNP per capita (US\$), 1995: 320, PPP estimates of GNP per capita (current int’l \$), 1995: 930.
Average distribution of labour force by sector, 1990-1992 : agriculture 84%; industry 7%; services 9%
Adult literacy rate (per cent), 1995 : total 39; male 53; female 25

Alcohol production, trade and industry

The Gambia produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption in the Gambia is very low. However, there is no information available on consumption of alcoholic beverages produced at home or by the informal sector.

Alcohol policies

Control of alcohol products

The Liquor Licensing Act requires a licence to sell alcohol. Off-premise consumption hours are 08:00 to 22:00 hours on weekdays. The selling of alcohol to persons under the age of 16 is punishable by a fine.

The government uses duties on alcohol production and imports to curtail alcohol consumption. These duties on alcohol are increased annually. High import duties serve the additional purpose of protecting local brewing industries such as Banjul Brewery.

Alcohol data collection, research and treatment

Medical personnel at the Royal Victoria Hospital, private doctors and psychiatric nurses offer treatment for patients with alcohol-related problems, the latter becoming involved when alcohol and psychiatric problems occur in tandem. In collaboration with Gampama Mental Home, the Social Welfare Department provides counselling and follow-up services for patients with alcohol-related problems.

Ghana

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	10 735 000	15 020 000	17 453 000
Adult (15+)	5 919 000	8 206 000	9 552 000
% Urban	31.2	34.0	36.3
% Rural	68.8	66.0	63.7

Health status

Life expectancy at birth, 1990-1995 : 54.2 (males), 57.8 (females)

Infant mortality rate in 1990-1995 : 81 per 1000 live births

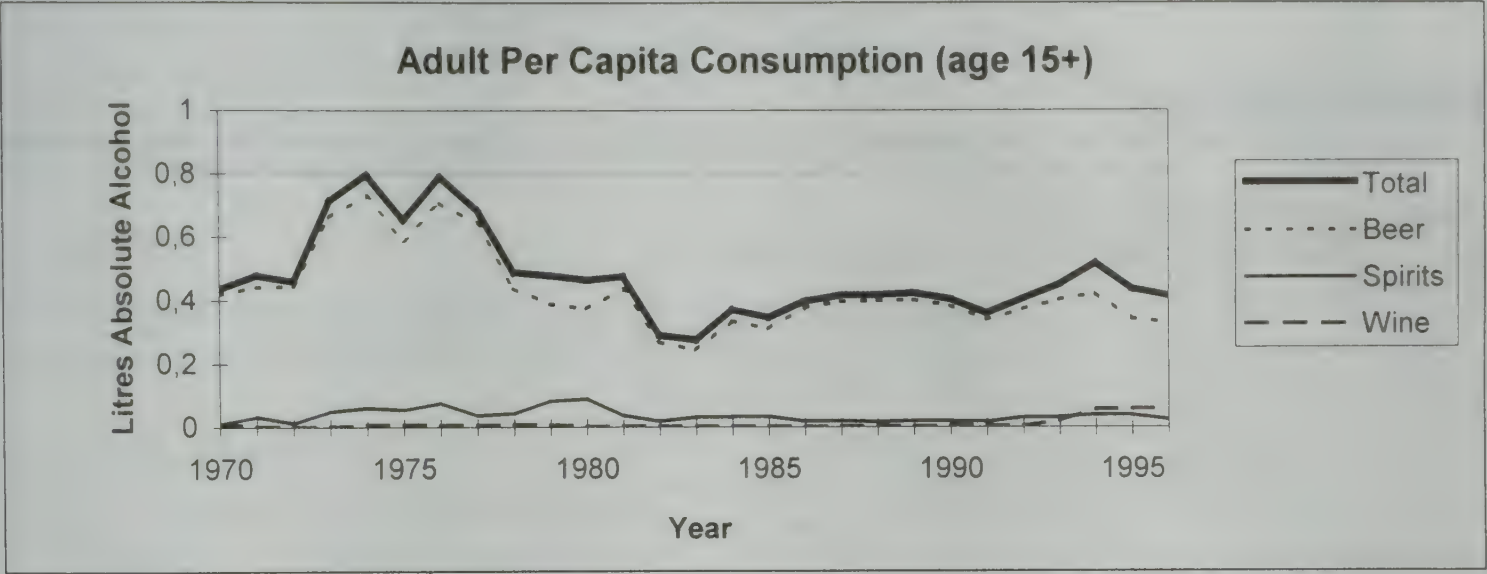
Socioeconomic situation

GNP per capita (US\$), 1995: 390, PPP estimates of GNP per capita (current int'l \$), 1995: 1990.

Average distribution of labour force by sector, 1990-1992 : agriculture 59%; industry 11%; services 30%

Adult literacy rate (per cent), 1995 : total 65; male 76; female 54

Alcohol consumption and prevalence



Consumption

The bulk of the beer consumed in Ghana is produced locally. Recorded local spirits production ceased in 1975. Wine drinking is rare, and all recorded wine consumption comes from imports. Both spirits and wine imports increased sharply during the 1990s, but overall adult consumption of absolute alcohol remained at less than one-half litre in this period. There is no information available on consumption of smuggled or home- or informally produced alcohol.

Guinea

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 461 000	5 755 000	6 700 000
Adult (15+)	2 420 000	3 067 000	3 543 000
% Urban	19.1	25.8	29.6
% Rural	80.9	74.2	70.4

Health status

Life expectancy at birth, 1990-1995 : 44 (males), 45 (females)

Infant mortality rate in 1990-1995 : 134 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 550.

Average distribution of labour force by sector, 1990-1992 : agriculture 78%; industry 1%; services 21%

Adult literacy rate (per cent), 1995 : total 36; male 50; female 22

Alcohol consumption and prevalence

YEAR	PRODUCT	ADULT PER CAPITA CONSUMPTION (litres absolute alcohol)
1970	Wine	0.005606
1992	Beer	0.147192

Consumption

There is no information available regarding recorded consumption of spirits in Guinea. Figures for wine from 1970 and for beer from 1992 show an extremely low level of recorded alcohol consumption. There is no information available regarding consumption of smuggled or home- or informally-produced alcohol.

Guinea-Bissau

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	795 000	964 000	1 073 000
Adult (15+)	485 000	570 000	627 000
% Urban	16.8	19.9	22.2
% Rural	83.2	80.1	77.8

Health status

Life expectancy at birth, 1990-1995 : 41.9 (males), 45.1 (females)

Infant mortality rate in 1990-1995 : 140 per 1000 live births

Socioeconomic Situation

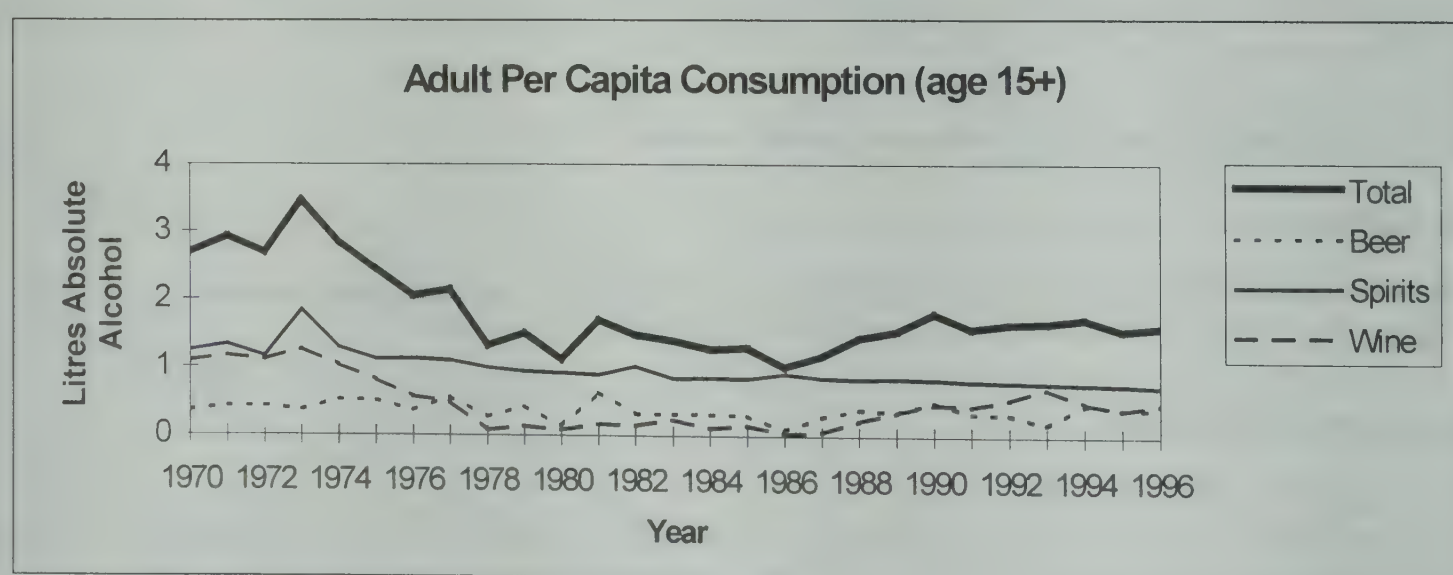
GNP per capita (US\$), 1995: 250, PPP estimates of GNP per capita (current int'l \$), 1995: 790.

Average distribution of labour force by sector, 1990-1992 : agriculture 82%; industry 4%; services 14%

Adult literacy rate (per cent), 1995 : total 55; male 68; female 42

Alcohol production, trade and industry

Guinea-Bissau produces beer and distilled spirits and imports wine.

Alcohol consumption and prevalence**Consumption**

Recorded production, trade and imputed consumption of alcohol in Guinea-Bissau is fairly low. Distilled spirits is the alcoholic beverage of choice. There are no data available on consumption of smuggled or home- or other informally-produced alcoholic beverages.

Kenya

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	16 632 000	23 613 000	28 261 000
Adult (15+)	8 300 000	12 005 000	14 873 000
% Urban	16.1	23.6	27.7
% Rural	83.9	76.4	72.3

Health status

Life expectancy at birth, 1990-1995 : 54.2 (males), 57.3 (females)

Infant mortality rate in 1990-1995 : 69 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 280, PPP estimates of GNP per capita (current int'l \$), 1995: 1380.

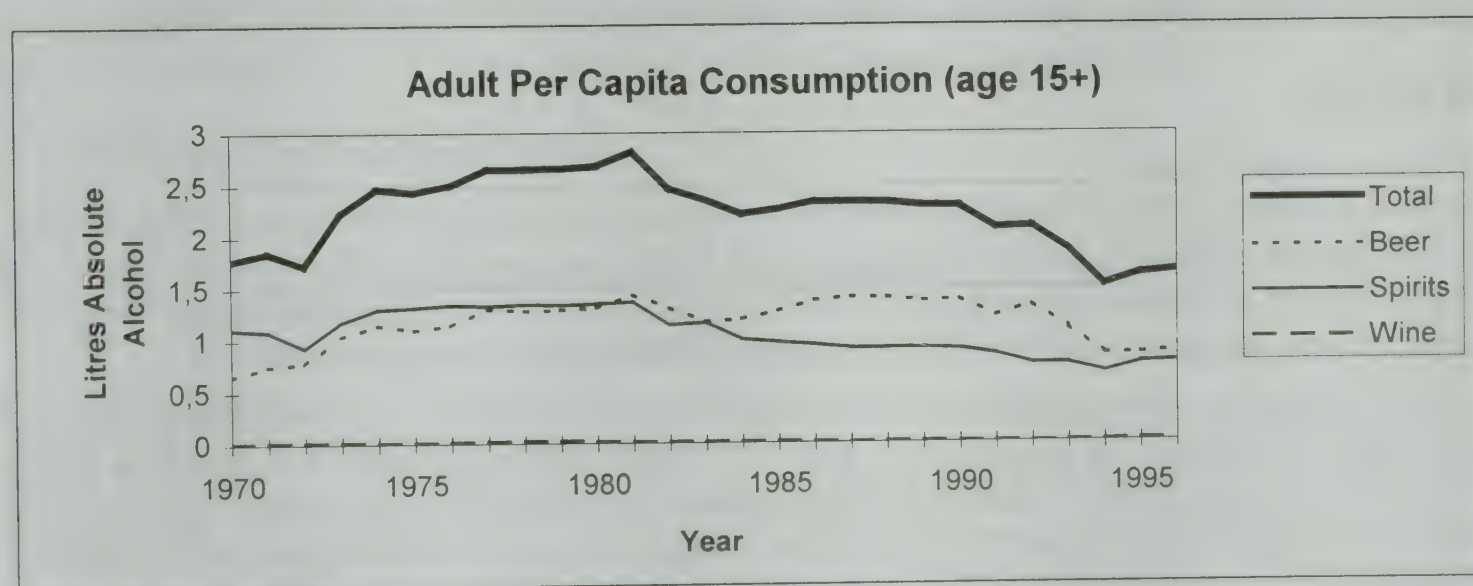
Average distribution of labour force by sector, 1990-1992 : agriculture 81%; industry 7%; services 12%

Adult literacy rate (per cent), 1995 : total 78; male 86; female 70

Alcohol production, trade and industry

Kenya Breweries Ltd (KBL) is the leading brewer in Kenya. In 1985, its turnover amounted to approximately US\$ 191 million, about US\$ 112 million of which went to the Treasury. KBL is a public company wholly owned by East African Breweries, and is the only producer of bottled beer in the country. The Kenyan Government, through its development companies, is the majority shareholder. KBL is one of the leading industrial enterprises in the country, employing about 3500 people directly and more than 50 000 indirectly.

Alcohol consumption and prevalence



Consumption

An estimated 80 to 90 per cent of Kenya's total alcohol comes from small-scale production within the informal sector, using traditional and local African methods of brewing and distilling. In 1978, illegally distilled *chang'ua* (a local spirits product containing up to 50 per cent alcohol) accounted for an estimated 36.5 per cent of total alcohol consumption, home-brewed traditional drinks accounted for 46.3 per cent and total unregistered consumption was estimated at 43.30 million litres of absolute alcohol. This implies a total consumption of approximately 8.25 litres of absolute alcohol per adult in 1978.

Prevalence

A 1987 WHO collaborative study recruited 291 subjects in three categories - drinking patients, heavy drinkers and abstainers - from patients attending general hospitals, emergency units and primary health care facilities. The average drinking patient (27.1 per cent of the interviewees) in a typical month consumed 97 grams per day, while heavy drinkers (19.3 per cent of the sample) averaged 237 grams per day. Drinkers in both categories were likely to drink frequently: in the past year, drinking patients had four drinks or more on a single occasion 98 times, while heavy drinkers had done so 249 times.

Age patterns

A 1989 survey of 2059 secondary school students in Nakuru found that 12 per cent of males reported drinking beer and 2 per cent reported drinking *chang'aa*, versus 3 per cent and 0.5 per cent respectively for females. A three-year study completed in 1995 of alcohol and other drug use in secondary schools and teacher training colleges nationwide surveyed 2381 students. Of these, 42 per cent had used beer or wine, 31.5 per cent had used spirits, and 22 per cent had drunk *chang'aa*.

Alcohol use among population subgroups

The same three-year study also gathered data from 884 teachers and parents. Of these, 41.2 per cent reported regular use of beer, 33.3 per cent reported regular use of spirits, 42.7 per cent used wine regularly and 8.3 per cent regularly used *chang'aa*.

Economic impact of alcohol

Approximately 10 per cent of national government revenue is derived from alcohol.

Mortality, morbidity, health and social problems from alcohol use**Morbidity**

A 1985 survey of 881 randomly selected patients attending outpatient clinics in four rural district hospitals in representative areas of Kenya diagnosed 3.1 per cent as alcohol dependents fitting ICD categories 291 and 300. Three quarters of the alcohol dependents were males.

Social problems

According to police statistics, the number of people apprehended for driving a motor vehicle under the influence of alcohol or other drugs rose from 171 to 272 between 1983 and 1985.

Alcohol policies**Control of alcohol products**

Beer is taxed an import duty of US\$ 0.60 per litre, an excise tax of US\$ 0.08 or US\$ 0.15 per litre, depending on original gravity, and a sales tax of US\$ 0.38 cents per litre. Wine has an import duty of 120 to 135 per cent of import value, and a 35 per cent sales tax. Spirits have an import duty of US\$ 7.22 per proof litre, an excise tax of US\$ 3.58 per proof litre and a 50 per cent sales tax.

The Liquor Licensing Act regulates the production and distribution of European-type alcoholic beverages that are imported or produced in Kenya. The Traditional Liquor Act regulates traditional African fermented beverages. Production of local spirits was banned by the Chang'aa Prohibition Act in 1980. According to the Liquor Licensing Act, licensees are forbidden from selling liquor to a person already in a state of intoxication or by any means encouraging or inciting him/her to drink liquor.

President Daniel Arap Moi ordered the closure of most of the on-premises drinking establishments that were licensed to brew and sell traditional African alcoholic beverages, and only a small number remain in the larger cities. No sales of alcohol are permitted to anyone under 18 years old, and alcohol advertising has been discontinued.

Control of alcohol problems

Drunkenness in a public place is punishable by arrest, imprisonment of up to three months, and a fine. The International Commission for the Prevention of Alcoholism and Drug Dependency is a governmental organization which deals with policy regarding alcohol-related problems. The Kenya

National Committee for the Prevention of Alcoholism and Drug Dependency works on similar issues as a nongovernmental organization.

In the absence of a legal BAC limit for motor vehicle operators and specific policies and strategies for discouraging driving under the influence of alcohol in Kenya, attempts by the traffic police to prosecute drunk drivers are unlikely to succeed.

Lesotho

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 339 000	1 792 000	2 050 000
Adult (15+)	777 000	1 024 000	1 189 000
% Urban	13.3	19.4	23.1
% Rural	86.8	80.6	76.9

Health status

Life expectancy at birth, 1990-1995 : 58 (males), 63 (females)

Infant mortality rate in 1990-1995 : 79 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 770, PPP estimates of GNP per capita (current int'l \$), 1995: 1780.

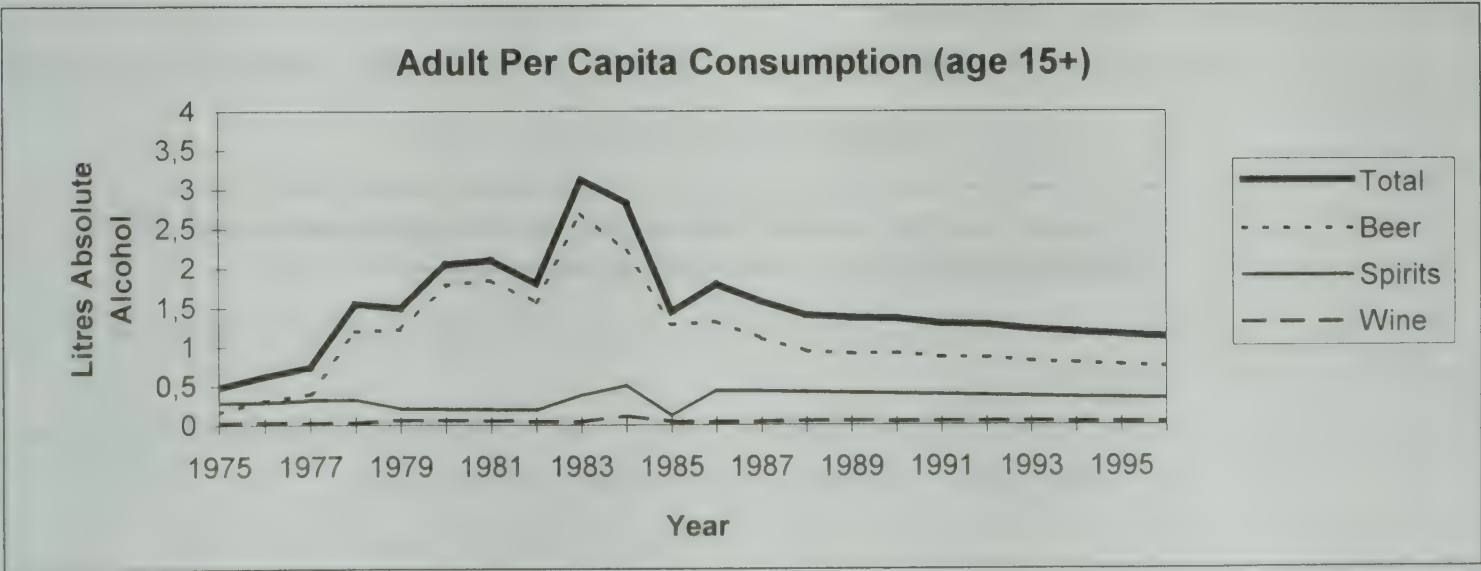
Average distribution of labour force by sector, 1990-1992 : agriculture 23%; industry 33%; services 44%

Adult literacy rate (per cent), 1995 : total 71; male 81; female 62

Alcohol production, trade and industry

South African Breweries' subsidiary Indol International BV has 39 per cent of the stock in and manages a 350 000 hectolitre brewery in partnership with the Lesotho government. Estimated total national beer production in 1990 was 360 000 hectolitres, excluding home brew.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption in Lesotho is driven primarily by beer consumption. This in turn is likely to be significantly under-reported due to the high number of adult drinkers who primarily drink home-brewed beer.

Prevalence

Close to three-quarters of adult drinkers identified in a 1996 baseline health study of 385 households in the Lesotho Highlands reported drinking home brew, with the remainder largely drinking industrialized beer. Almost half (47 per cent) of men and 19 per cent of women reported current alcohol use.

In a similar study in another part of the country in 1992, 42 per cent reported lifetime alcohol use (55 per cent of males and 35 per cent of females). Over one fifth of adult respondents reported daily use (23.3 per cent of males and 21.9 per cent of females). Approximately 44 per cent of men and 30 per cent of women reported drinking four or more times per week, and almost 30 per cent of men and 23 per cent of women reported drinking seven or more drinks per day on a typical drinking day. About 16 per cent of men and 11 per cent of women reported daily or almost daily drinking of six or more drinks on one occasion.

Age patterns

In the 1992 study, 16.9 per cent of respondents 15 to 29 years old, 48.8 per cent of respondents 30 to 45 years old, and 54.8 per cent of respondents 45 years and older reported current drinking. A national survey of secondary and high school students in 1989 indicated that 24.2 per cent of the total sample drank alcoholic beverages.

A 1989 interview survey of 1133 high school students aged 11 to 22 years found that about half of the students (54 per cent of the boys and 42 per cent of the girls) had drunk alcohol at some point in their lives. Drinking was positively associated with age, sex (male), drinking by friends, higher family income, and drinking in the family. No indication of widespread alcohol abuse was found, but about half of the students believed that moderate drinking is impossible and that the fun of drinking is to get drunk.

Economic impact of alcohol

In the 1995 Lesotho Highlands study, 27 per cent of the households sold *joala*, a homebrew, and 3.3 sold commercial beer. The mean monthly income from the sale of joala was 42.79 maloti. The mean monthly income from the sale of commercial beer was 110.50 maloti (US\$ 18.08).

An unpublished study from 1990/1991 estimated that sales of home brew accounted for 44.8 per cent and 60 per cent of household income in the Muela and Katse areas, while sale of commercial beer accounted for 8 per cent and 5.8 per cent respectively.

Mortality, morbidity, health and social problems from alcohol use***Alcohol dependence and related disorders***

In 1984, more than 15 per cent of the total admissions at the Zomba Mental Hospital were classified as "alcohol addicts".

Morbidity

A 1996 random, population-based survey found that 12 per cent of men and 6 per cent of women reported that they or others had been injured as a result of their drinking.

In a 1988 study of all patients with assault trauma entering Quthing District Hospital, alcohol was present in 47 per cent of incidents.

In 1984 a study of 257 pairs of cervical cancer patients and controls found an elevated risk of cancer in the cervix among Lesotho women who consumed locally-produced alcohol.

Alcohol policies***Control of alcohol products***

The Government Liquor Commission imposes a 15 per cent tax on imported beverages. The sale of alcoholic beverages to persons under the age of 18 is prohibited. Late hours liquor licences may be granted for single events, but may not be issued to any particular premises more than three times in a calendar week. An amendment to the Liquor Licensing Bill has been proposed which would

strengthen laws dealing with classes of licences, late hour licences, the supply of alcohol to minors and the employment of minors by liquor-related retail outlets.

Alcohol data collection, research and treatment

The Community Alcohol Rehabilitation Centre (CARP - at Scott Hospital) is a nongovernmental organization that deals with abuse treatment, counselling and education. Blue Cross and the Christian Council of Lesotho both run alcohol treatment programmes and counselling sessions. There are two alcohol rehabilitation centres in Lesotho, but these are not easily accessible; 193 of 385 respondents in a 1996 health survey conducted in the Lesotho Highlands said it would be "difficult" or "very difficult" to reach mental health/substance abuse services. More than 80 per cent indicated that it would take them in excess of two hours to reach such services, and 14.8 per cent said that it would take 10 or more hours. Roughly two-thirds of respondents thought they would be able to afford such treatment. Over three-quarters felt that the treatment provided by the services would be successful, but men appeared to be less certain than women (67.1 per cent versus 81 per cent).

Liberia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 876 000	2 575 000	3 039 000
Adult (15+)	1 045 000	1 409 000	1 641 000
% Urban	35.0	42.1	45.0
% Rural	65.0	57.9	55.0

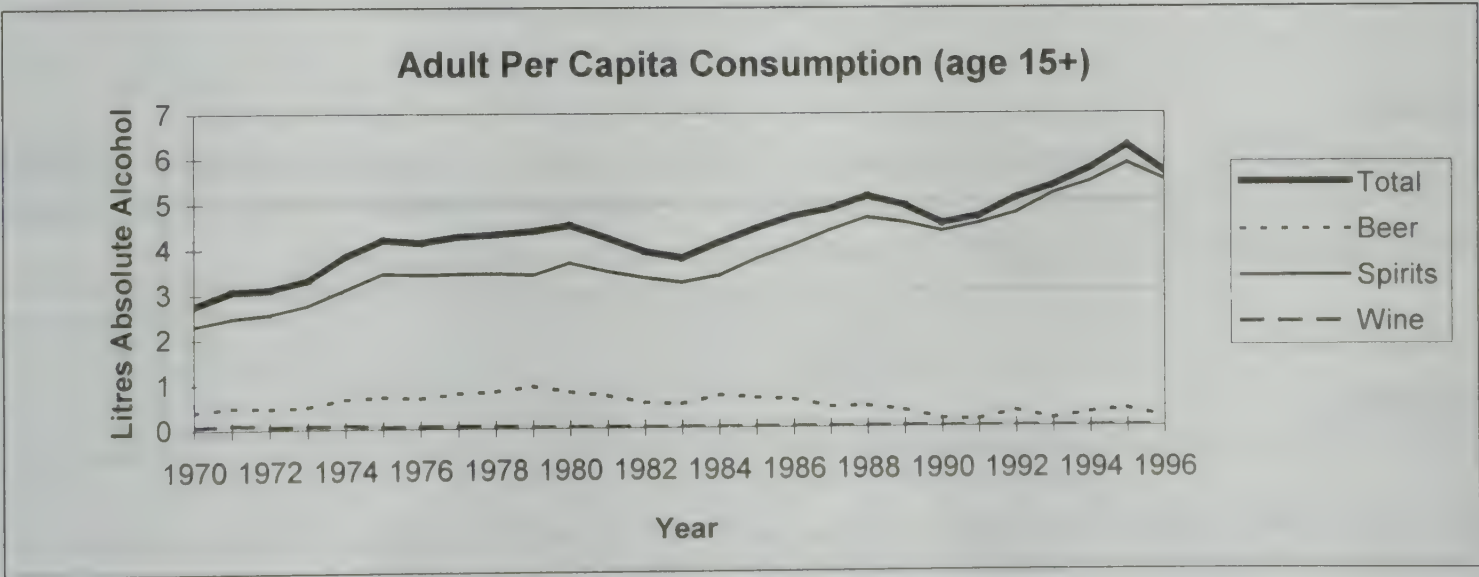
Health status

Life expectancy at birth, 1990-1995 : 54 (males), 57 (females)
Infant mortality rate in 1990-1995 : 126 per 1000 live births

Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 75%; industry 9%; services 16%
Adult literacy rate (per cent), 1995 : total 38; male 54; female 22

Alcohol consumption and prevalence



Consumption

The bulk of recorded beer and spirits consumed are produced locally. Wine is imported. There is no information available on consumption of smuggled or home-or informally-produced alcohol.

Madagascar

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 063 000	12 571 000	14 763 000
Adult (15+)	4 990 000	6 766 000	7 962 000
% Urban	18.3	23.8	27.1
% Rural	81.7	76.2	72.9

Health status

Life expectancy at birth, 1990-1995 : 55 (males), 58 (females)

Infant mortality rate in 1990-1995 : 93 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 230, PPP estimates of GNP per capita (current int'l \$), 1995: 640.

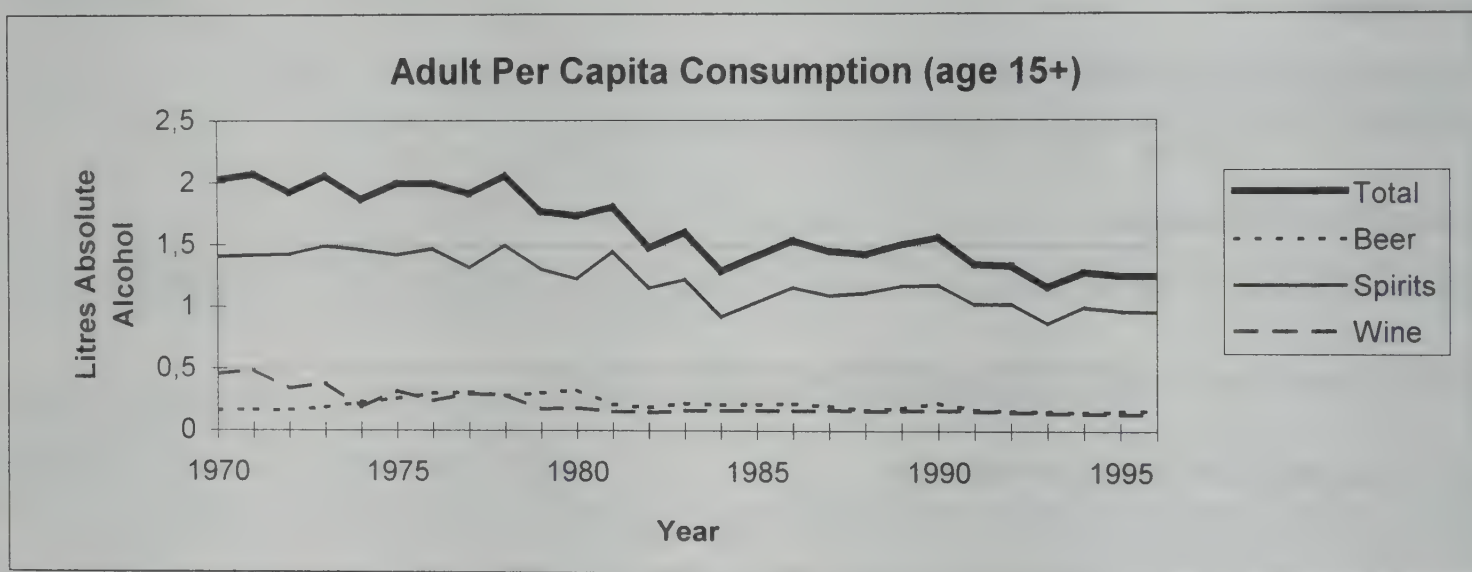
Average distribution of labour force by sector, 1990-1992 : agriculture 81%; industry 6%; services 13%

Adult literacy rate (per cent), 1995 : total 81; male 90; female 74

Alcohol production, trade and industry

Madagascar produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

A former French colony, Madagascar has seen its recorded alcohol consumption decline steadily over the past 25 years, driven primarily by a decrease in spirits consumption. There is no information available on consumption of smuggled or home- or informally produced alcohol.

Malawi

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 183 000	9 367 000	11 129 000
Adult (15+)	3 247 000	4 963 000	5 926 000
% Urban	9.1	11.8	13.5
% Rural	90.9	88.2	86.5

Health status

Life expectancy at birth, 1990-1995 : 45 (males), 46.2 (females)
Infant mortality rate in 1990-1995 : 143 per 1000 live births

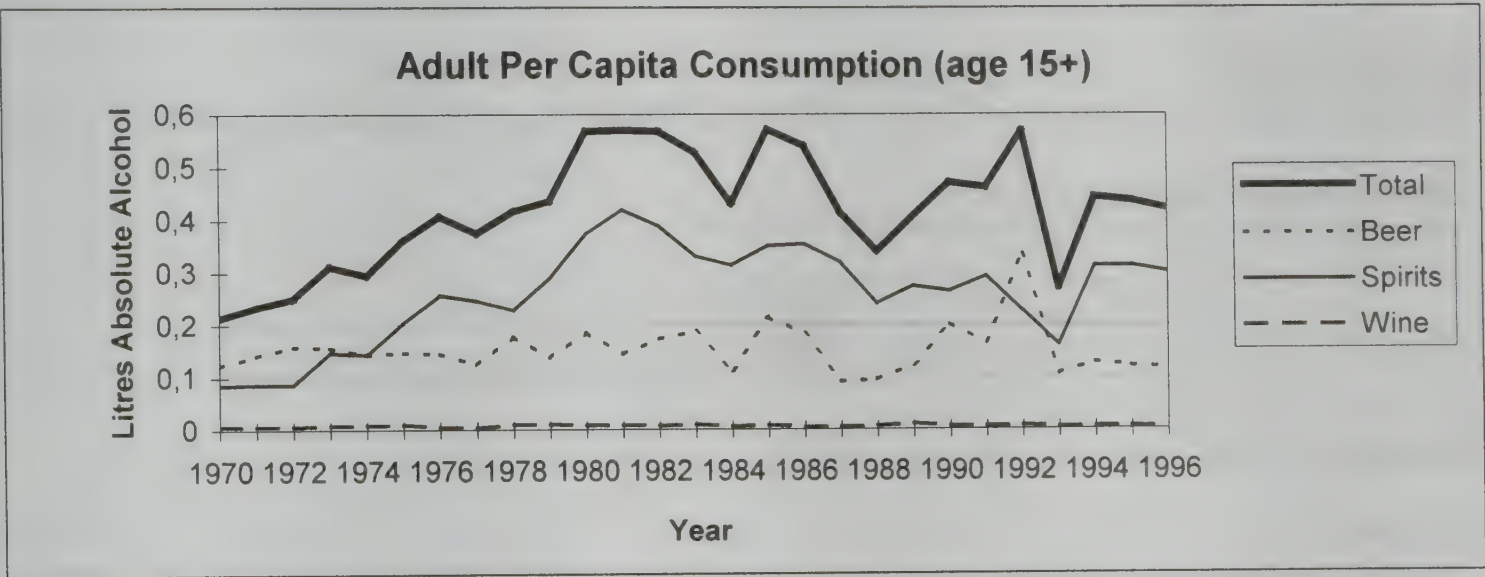
Socioeconomic situation

GNP per capita (US\$), 1995: 170, PPP estimates of GNP per capita (current int'l \$), 1995: 750.
Average distribution of labour force by sector, 1990-1992 : agriculture 87%; industry 5%; services 8%
Adult literacy rate (per cent), 1995 : total 56; male 72; female 42

Alcohol production, trade and industry

Malawi produces beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

Recorded consumption of alcohol in Malawi is extremely low, and most of the consumption is attributable to spirits. There is no information available on consumption of smuggled or informal or home brewed produced alcohol.

Alcohol policies

Control of alcohol products

The Liquor Licensing Act regulates the availability and marketing of alcohol products through Liquor Licensing Boards in every jurisdiction.

Mali

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 863 000	9 212 000	10 795 000
Adult (15+)	3 653 000	4 888 000	5 676 000
% Urban	18.5	23.8	27.0
% Rural	81.5	76.2	73.1

Health status

Life expectancy at birth, 1990-1995 : 44.4 (males), 47.6 (females)
Infant mortality rate in 1990-1995 : 159 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 250, PPP estimates of GNP per capita (current int'l \$), 1995: 550.
Average distribution of labour force by sector, 1990-1992 : agriculture 85%; industry 2%; services 13%
Adult literacy rate (per cent), 1995 : total 31; male 39; female 23

Alcohol consumption and prevalence

Consumption

Recorded beer production and imputed consumption in Mali has kept pace with population growth in recent years, but remains at a very low level. Recorded consumption of spirits and wines, entirely from imported beverages, is also extremely low (approximately 0.04 litres of pure alcohol per adult). There is no information available regarding consumption of smuggled or informally- or home-produced alcohol.

Mauritania

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 551 000	2 003 000	2 274 000
Adult (15+)	876 000	1 117 000	1 293 000
% Urban	29.0	46.8	53.8
% Rural	71.0	53.2	46.2

Health status

Life expectancy at birth, 1990-1995 : 49.9 (males), 53.1 (females)
Infant mortality rate in 1990-1995 : 101 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 460, PPP estimates of GNP per capita (current int'l \$), 1995: 1540.
Average distribution of labour force by sector, 1990-1992 : agriculture 69%; industry 9%; services 22%
Adult literacy rate (per cent), 1995 : total 38; male 50; female 26

Alcohol consumption and prevalence

In a country where 99 per cent of the population professes allegiance to Islam, there have been no reports of alcohol production or trade since 1972, when per capita consumption of absolute alcohol (imputed from import data for beer, wine and spirits) was approximately one-tenth of a litre per adult.

Mauritius

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	966 000	1 057 000	1 117 000
Adult (15+)	622 000	744 000	808 000
% Urban	42.3	40.5	40.6
% Rural	57.7	59.5	59.4

Health status

Life expectancy at birth, 1990-1995 : 66.9 (males), 73.8 (females)

Infant mortality rate in 1990-1995 : 18 per 1000 live births

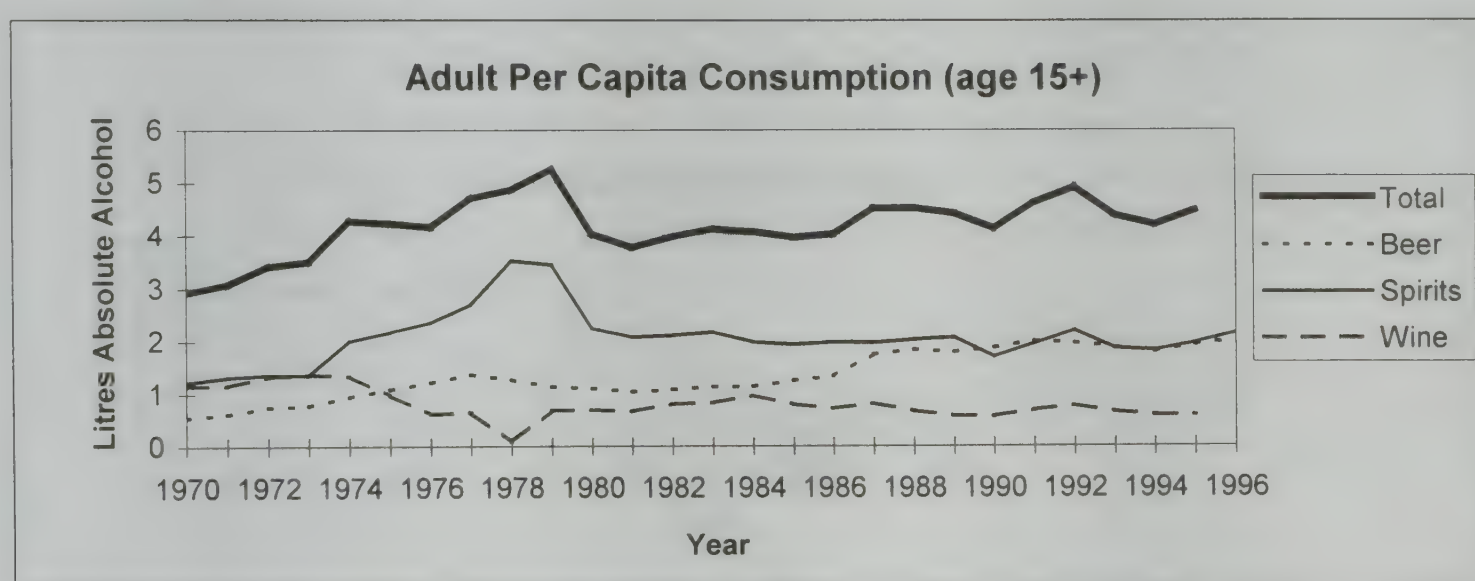
Socioeconomic situation

GNP per capita (US\$), 1995: 3380, PPP estimates of GNP per capita (current int'l \$), 1995: 13 210.

Average distribution of labour force by sector, 1990-1992 : agriculture 16%; industry 30%; services 54%

Adult literacy rate (per cent), 1995 : total 83; male 87; female 79

Alcohol consumption and prevalence



Consumption

Driven primarily by growing consumption of spirits, adult per capita consumption of alcohol in Mauritius rose during the 1970s but levelled off thereafter. The bulk of recorded consumption comes from domestically-produced beer and spirits.

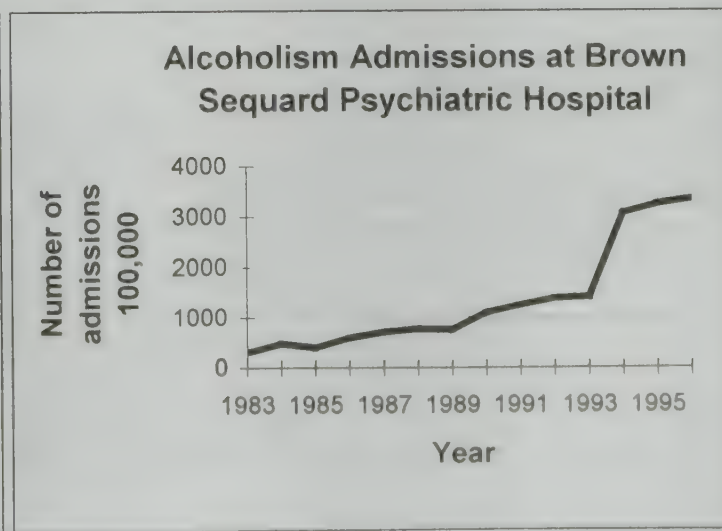
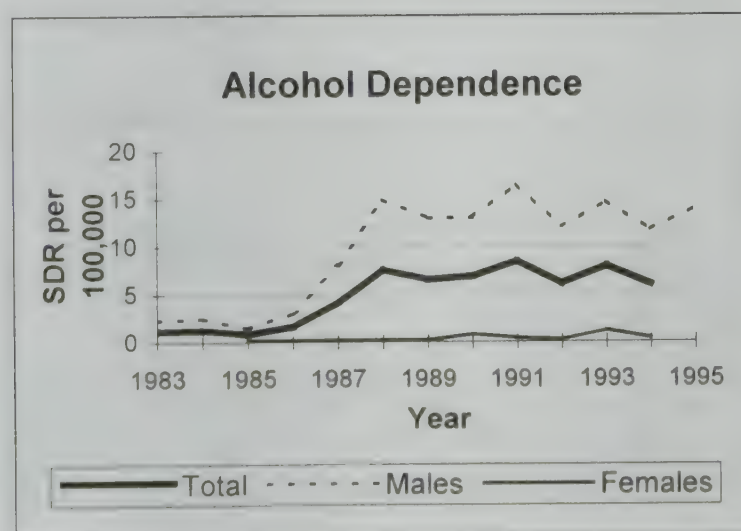
Prevalence

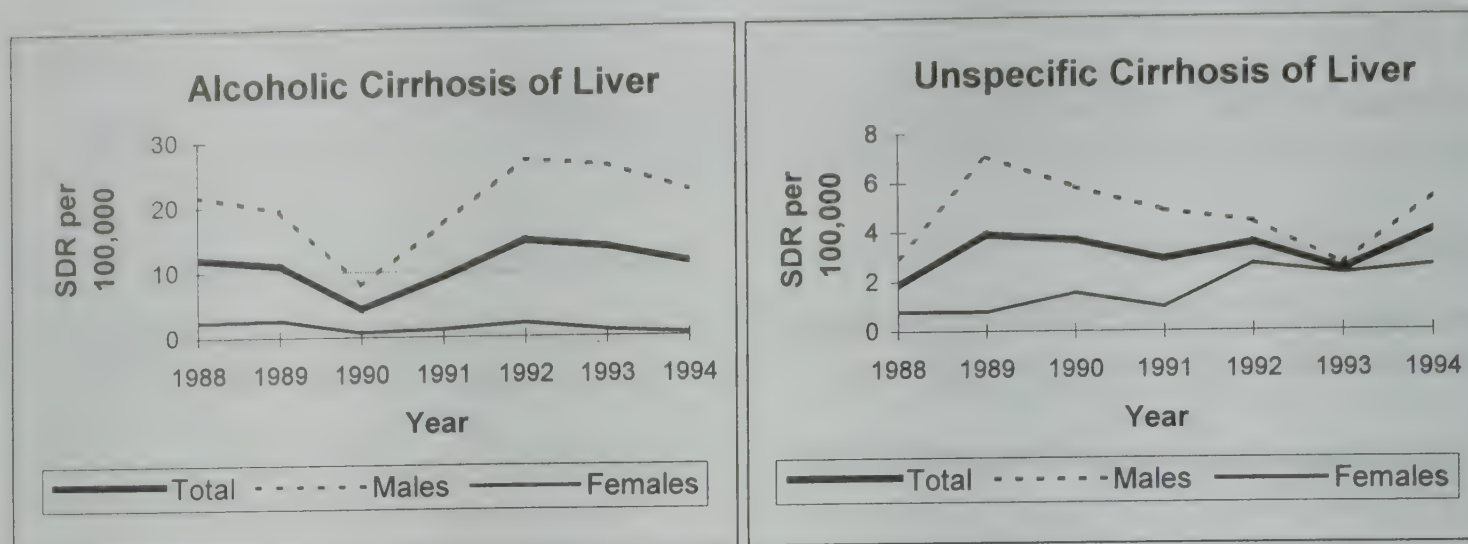
A 1987 population-based study found that 78 per cent of males drank alcohol, and 11 per cent of these men drank more than five standard units of alcohol per day. Approximately 47 per cent of Mauritian females drank alcohol and 95 per cent of female drinkers consumed two or fewer units per day.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

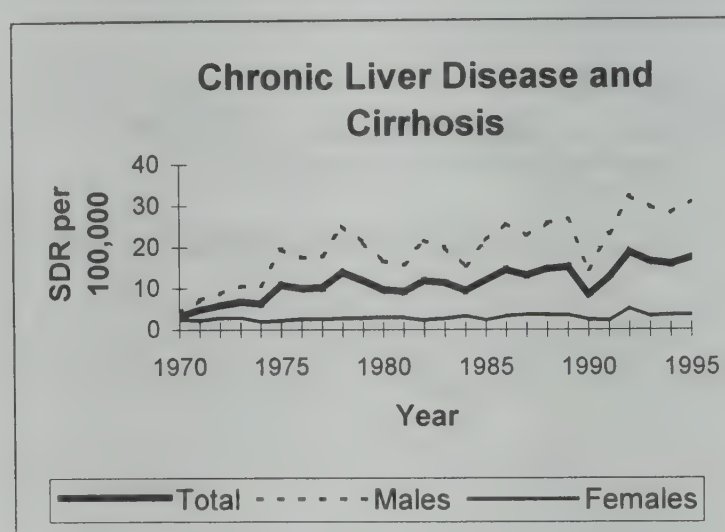
As the charts below show, the SDR per 100 000 population, now fifth highest in the world, as well as admissions for alcohol dependence have increased dramatically during the 1990s.





Mortality

Deaths from alcoholic cirrhosis have trended slightly down since 1992.



Alcohol policies

Control of alcohol products

The minimum legal drinking age is 18. The legal BAC limit is 0.08 g%. Sponsorship of sporting events by alcohol companies is forbidden. There was a dramatic increase in the excise tax on alcohol in June 1994.

Alcohol data collection, research and treatment

There is no separate legislation on drug dependence or on alcohol dependence, and it is reported that for alcohol-related physical problems, patients are treated in general hospitals. However, if there are severe alcohol withdrawal symptoms accompanied by psychosis, patients are treated at a psychiatric hospital to which they are admitted only under an interim order issued by a magistrate under the provisions of the Lunacy Act 1906 which governs mental patients and mental hospitals.

Mozambique

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	12 095 000	14 187 000	16 004 000
Adult (15+)	6 845 000	7 904 000	8 842 000
% Urban	13.1	26.8	34.3
% Rural	86.9	73.3	65.8

Health status

Life expectancy at birth, 1990-1995 : 44.9 (males), 48 (females)

Infant mortality rate in 1990-1995 : 148 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 80, PPP estimates of GNP per capita (current int'l \$), 1995: 810.

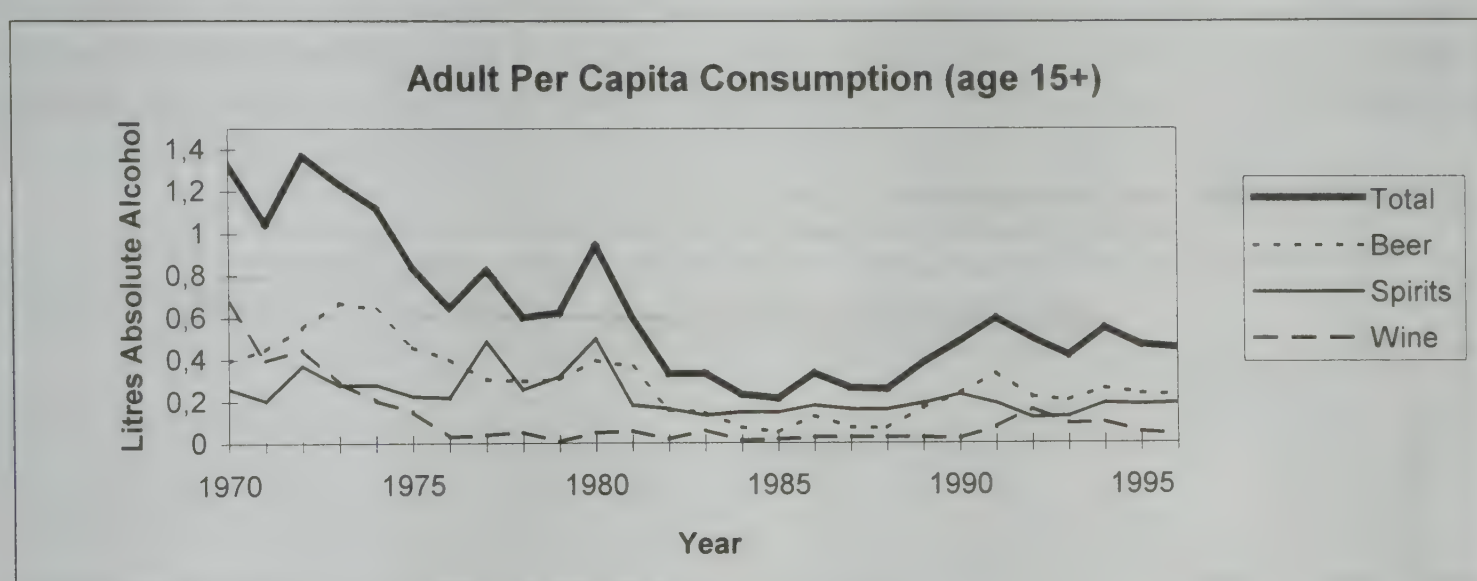
Average distribution of labour force by sector, 1990-1992 : agriculture 85%; industry 7%; services 8%

Adult literacy rate (per cent), 1995 : total 40; male 58; female 31

Alcohol production, trade and industry

South African Breweries owns 70 per cent of a 550 000 hectolitre brewery through its subsidiary, Indol International BV. In 1995 the International Finance Corporation loaned US\$ 1.2 million to Refrigerantes da Biera Limitada to buy and refit a beer and soft drink plant.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption is quite low. However this does not give an accurate view of consumption in Mozambique, since the majority of alcohol consumed is home brewed or distilled beverages.

Alcohol policies

Control of alcohol products

There is a law forbidding people under the age of 18 to buy alcohol, but it is reportedly not enforced.

Control of alcohol problems

While there is legislation against drunk driving, the police have insufficient equipment to enforce it.

Alcohol data collection, research and treatment

The Psychiatric Centre at Hospital Central de Maputo treated 56 cases of alcoholic psychosis between January and November of 1997.

Namibia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 030 000	1 349 000	1 540 000
Adult (15+)	585 000	773 000	894 000
% Urban	22.8	31.9	37.4
% Rural	77.2	68.1	62.6

Health status

Life expectancy at birth, 1990-1995 : 57.5 (males), 60 (females)

Infant mortality rate in 1990-1995 : 60 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2000, PPP estimates of GNP per capita (current int'l \$), 1995: 4150.

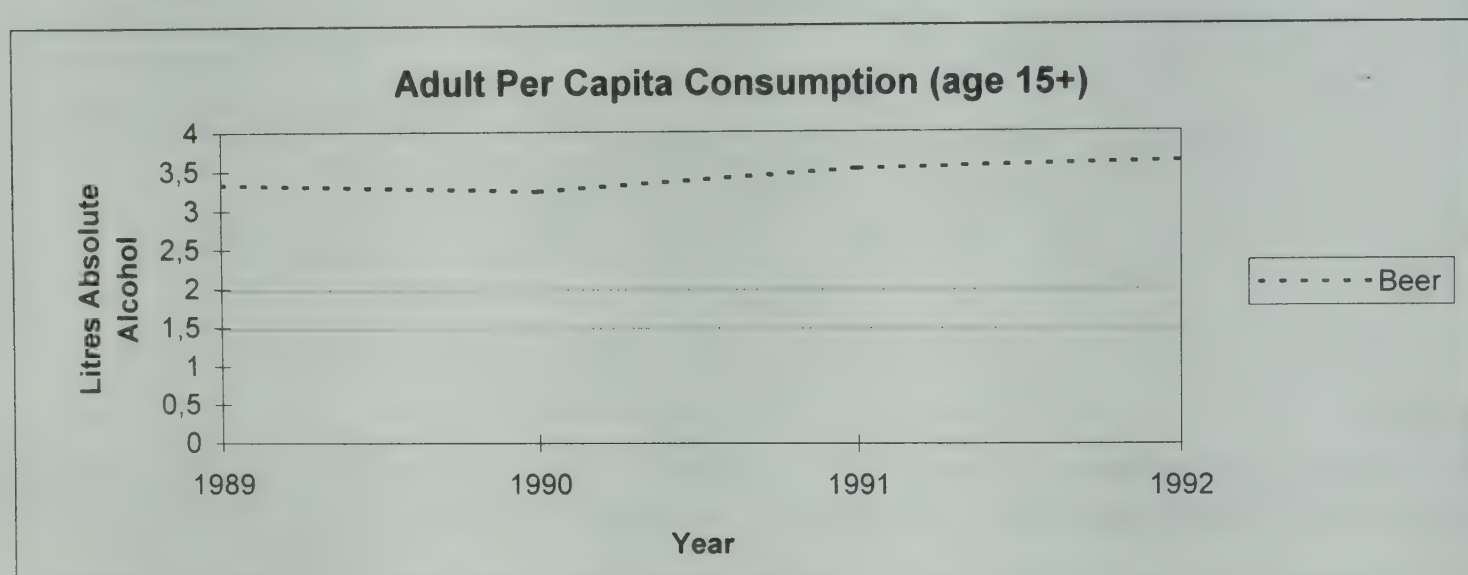
Average distribution of labour force by sector, 1990-1992 : agriculture 43%; industry 22%; services 35%

Adult literacy rate (per cent), 1995 : total 38; male 45; female 31

Alcohol production, trade and industry

South African Breweries, through its subsidiary Indol International BV, owns a 75 000 hectolitre brewery in Namibia, and has a five percent equity investment in Namibia Breweries. As of 1998 South African Breweries was also planning to set up a US\$ 50 million brewery in Namibia which would have a capacity of 800 000 hectolitres a year, and they have proposed a partnership with Namibian businessmen to set up a US\$ 25 million facility at the northern Namibian town of Oshakati.

Alcohol consumption and prevalence



Consumption

Recorded beer consumption rose slightly in the early 1990s, to approximately 3.6 litres of pure alcohol per adults. There is no data available regarding commercial spirits or wine consumption, nor is there information relating to levels of consumption of smuggled or home- or informally-brewed or distilled beverages.

Age Patterns

Five studies from 1991 and 1992 have reported that 20 per cent of school children and 75 per cent of out-of-school youth abuse alcohol over weekends.

Mortality, morbidity, health and social problems from alcohol use

A study of groups of settled Kung san living in the northern Kalahari Desert of Namibia found raised serum gamma glutamyl transferase (gamma GT - a marker for liver damage) in 30 per cent of the men and 11 per cent of the women, and suggested that alcohol abuse was the main contributory factor.

Alcohol policies

Control of alcohol products

At present, the Liquor Ordinance (No. 2 of 1969) is the most important legal provision concerning the supply of liquor and other alcoholic beverages in Namibia. The purpose of the Liquor Act is to limit the abuse of liquor by controlling the distribution by means of licensing procedures. According to this ordinance, only people who have the necessary licences may trade in liquor, and such trade must take place strictly within the limits of the licence and the regulations of the Liquor Act. In this way the trade in liquor is strictly limited with regard to the time when liquor may be sold, the places where it

may be sold, the kind and quantities of liquor which may be sold, and the people to whom it may be sold. At the time of writing, a new Liquor Act is to be promulgated which will also provide for the licensing of *shebeens*. These outlets will have to sell food and soft drinks as well, and they will be prohibited from selling spirits and other beverages with high alcohol content. The advertising of liquor will also be drastically limited in terms of the new Act.

Control of alcohol problems

Namibia has prepared a national substance abuse strategy: "Programme for the Prevention and Combating of Substance Abuse and Illicit Drug Trafficking."

Alcohol data collection, research and treatment

Alcohol dependent persons are treated at Ichtusland (a residential treatment centre North of Windhoek). Three private welfare agencies render treatment services to alcohol and drug dependent persons. These are the Kerklike Maatskaplike Raad of the Dutch Reformed Church, the Welfare Association of the Dutch Reformed Church in Khomasdal and the Drug Action Group. Local Alcoholics Anonymous, Christelike Askie Dioenste, Pioneers and Windhoek Association for Combating Alcoholism groups form the backbone of rehabilitation work in Namibia.

Niger (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 586 000	7 731 000	9 151 000
Adult (15+)	2 974 000	4 046 000	4 723 000
% Urban	12.4	15.2	17.0
% Rural	87.6	84.8	83.0

Health status

Life expectancy at birth, 1990-1995 : 44.9 (males), 48.1 (females)
Infant mortality rate in 1990-1995 : 124 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 220, PPP estimates of GNP per capita (current int'l \$), 1995: 750.
Average distribution of labour force by sector, 1990-1992 : agriculture 85%; industry 3%; services 12%
Adult literacy rate (per cent), 1995 : total 14; male 21; female 7

Alcohol consumption and prevalence

Consumption

Recorded beer consumption reached its peak in 1982 at 0.16 litres of pure alcohol per adult. Recorded spirits and wine consumption are all from imports, and occur at similarly low levels. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Nigeria

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	72 024 000	96 154 000	111 721 000
Adult (15+)	40 090 000	52 545 000	60 806 000
% Urban	27.1	35.2	39.3
% Rural	72.9	64.8	60.7

Health status

Life expectancy at birth, 1990-1995 : 48.8 (males), 52 (females)

Infant mortality rate in 1990-1995 : 84 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 260, PPP estimates of GNP per capita (current int'l \$), 1995: 1220.

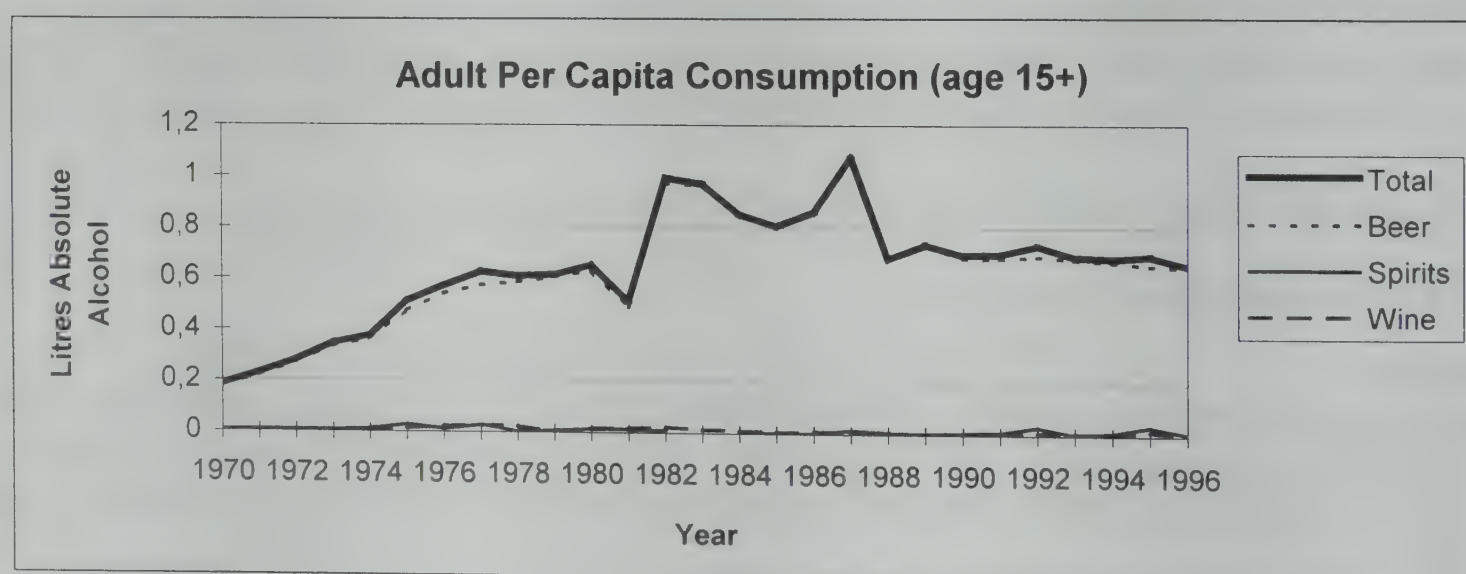
Average distribution of labour force by sector, 1990-1992 : agriculture 48%; industry 7%; services 45%

Adult literacy rate (per cent), 1995 : total 57; male 67; female 47

Alcohol production, trade and industry

Nigerian Breweries Limited became the first beer maker in the country in 1949, and remained so for 10 years. During the oil boom of the 1970s and early 1980s, the number of breweries increased to more than 30 by 1988. The annual local production from the local breweries rose from 6.3 million hectolitres in 1979 to 9.36 million hectolitres in 1982, and the aggregate net income of the breweries within this same period rose from 94 million naira (US\$ 1.1 million) to 198.7 million naira (US\$ 2.3 million). The number of brewery employees was 22 056 in 1982, out of a population of approximately 80 million. In addition to the breweries, there are now four distilleries and nine wineries.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice in Nigeria is beer. There are no figures available for the amount of traditional beverages consumed.

Prevalence

Rates of consumption vary widely from region to region, as evidenced by a 1990 study of 1052 respondents in two cities (Benin City and Ibadan), which showed that 89.6 per cent of Ibadan respondents claimed to consume no beer at all as opposed to 51 per cent in Benin City. Of those who

did consume alcohol, most were urban males between 10 and 29 years old, and most reported drinking on a daily or weekly basis.

A 1993 survey in the Middlebelt region drew a random sampling of 1562 respondents. Of these, 37.5 per cent abstained from alcohol, 8.8 per cent were former drinkers, 8.9 per cent were infrequent drinkers, 16.5 per cent were light drinkers, 16.7 per cent were moderate drinkers, and 10.4 per cent were heavy drinkers. Among alcohol drinkers, beer was the usual beverage consumed (43.5 per cent). Traditional beverages were the usual drink for 21.4 per cent of drinkers in the sample, and 39.2 per cent of the drinkers (20.8 per cent of the sample) reported drinking some form of alcoholic beverage at least once a day in the past year. Nearly three quarters of alcohol consumers (35.8 per cent of the sample) reported drinking at least three bottles of beer in a typical drinking session. This level of drinking was also found among consumers of traditional beverages and liquor.

Age patterns

In June 1988, a questionnaire survey of 636 students at the University of Ilorin in Kwara State found that 77 per cent reported lifetime alcohol use (81 per cent of men and 68 per cent of women). In response to a 1988 survey of 1041 senior secondary school students in Ilorin, 12 per cent reported current use of alcohol.

Economic impact of alcohol

In 1984, the brewery industry paid a total of two billion naira (US\$ 23.3 million) in taxes to the Federal Government, a figure representing two per cent of the total non-oil sector of the economy.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

A 1992 study of 5200 civil servants, factory and plantation workers living in an urban setting in the south-eastern part of Nigeria found that prevalence of hypertension to be higher in medium and heavy drinkers than non-drinkers and light-drinkers.

Self-reports of health problems from the sample interviewed in the Middlebelt region showed significant differences between drinkers and non-drinkers (at least $p < .05$) for the following health problems: kidney problems (6.3 per cent of drinkers versus 1.5 per cent of non-drinkers); strokes (4.9 per cent versus 2.4 per cent); nervous conditions (10.3 per cent versus 5.4 per cent); blood circulation problems (8.3 per cent versus 4.2 per cent); head injuries (9.8 per cent versus 5.8 per cent); broken bones (6.7 per cent versus 3.4 per cent); and weight gain (27.8 per cent versus 13 per cent).

A study published in 1993 of aetiological factors in 84 patients with acute gastrointestinal tract haemorrhage found acute consumption of alcohol and other drugs to be the most common single or combined factor in more than 90 per cent of the patients.

Social Problems

A retrospective analysis of the case records of all patients admitted to the 13 psychiatric centres in northern Nigeria and the 15 centres in the south was carried out in 1989. In the north, the relative frequency at which the abuse of substances was recorded was 19.9 per cent for alcohol versus 15.6 per cent for alcohol in the south.

In 1993, 43.7 per cent of 1000 randomly selected abused women reported drinking beer daily. Over 64 per cent drank a bottle per day and the remainder drank between two and five bottles per day.

A survey of admissions into four psychiatric hospitals between 1984 and 1988 found that alcohol alone was involved in eight per cent of the total number of cases and in nearly 50 per cent of the poly-drug cases reported.

Alcohol policies

Control of alcohol products

Officially, no alcohol may be served in hotels and bars before noon, but this regulation is generally not enforced. Illicit gin is no longer prohibited. Alcohol is also reported to be one of the most accessible and least regulated products on the Nigerian market.

Control of alcohol problems

There is no law concerning permissible concentration of alcohol in the blood for drivers. There is no legislation regarding the minimum age limit for purchase of alcohol, hours of sale or standards for operation or licensing of liquor outlets.

Alcohol data collection, research and treatment

A programme for the treatment of alcohol and drug dependence at the Neuropsychiatric Hospital in Aro, in the region of Abeokuta, is based on a modified Minnesota/Therapeutic Community model, incorporating the disease concept of drug dependence and the 12-steps of Alcoholics Anonymous. There are very few alcohol treatment units which operate as part of general psychiatric facilities. These units admit patients with alcohol problems but generally are ill-equipped and lacking specialists in alcohol problems. Physical complications are usually treated in general medical units. It is difficult to find general practitioners with specialized knowledge and skill in alcohol counselling. No nongovernmental treatment services or service policies exist.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Nigeria.

Rwanda

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 163 000	6 986 000	7 952 000
Adult (15+)	2 645 000	3 674 000	4 294 000
% Urban	4.8	5.6	6.1
% Rural	95.3	94.4	93.9

Health status

Life expectancy at birth, 1990-1995 : 45.8 (males), 48.9 (females)

Infant mortality rate in 1990-1995 : 110 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 180, PPP estimates of GNP per capita (current int'l \$), 1995: 540.

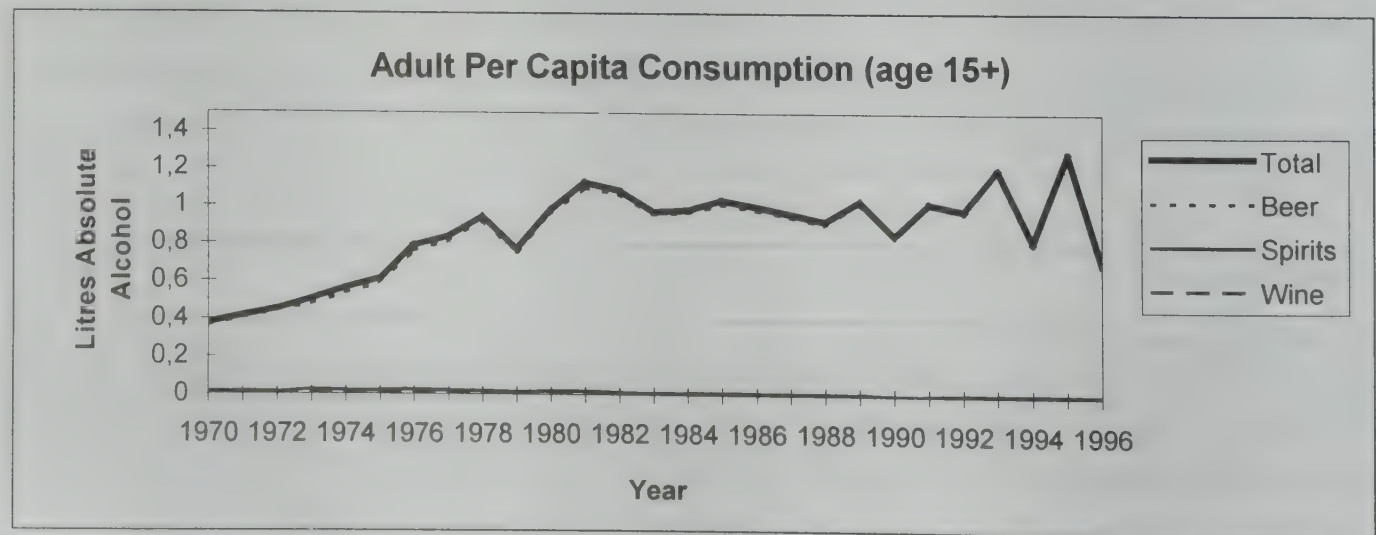
Average distribution of labour force by sector, 1990-1992 : agriculture 90%; industry 2%; services 8%

Adult literacy rate (per cent), 1995 : total 61; male 70; female 52

Alcohol production, trade and industry

Heineken NV produces beer at a plant in Kigali, in which the government of Rwanda has a 30 per cent interest.

Alcohol consumption and prevalence



Consumption

Wine figures are only available for the years 1983 to 1988. According to these figures, Rwandans drink very large amounts of wine and/or cider - as high as 13 litres of pure alcohol per adult in 1988, the last year for which figures are available. There is no information available on consumption of smuggled or home- or informally-produced alcohol.

Senegal

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 538 000	7 327 000	8 312 000
Adult (15+)	3 027 000	3 997 000	4 608 000
% Urban	35.9	39.8	42.3
% Rural	64.1	60.2	57.8

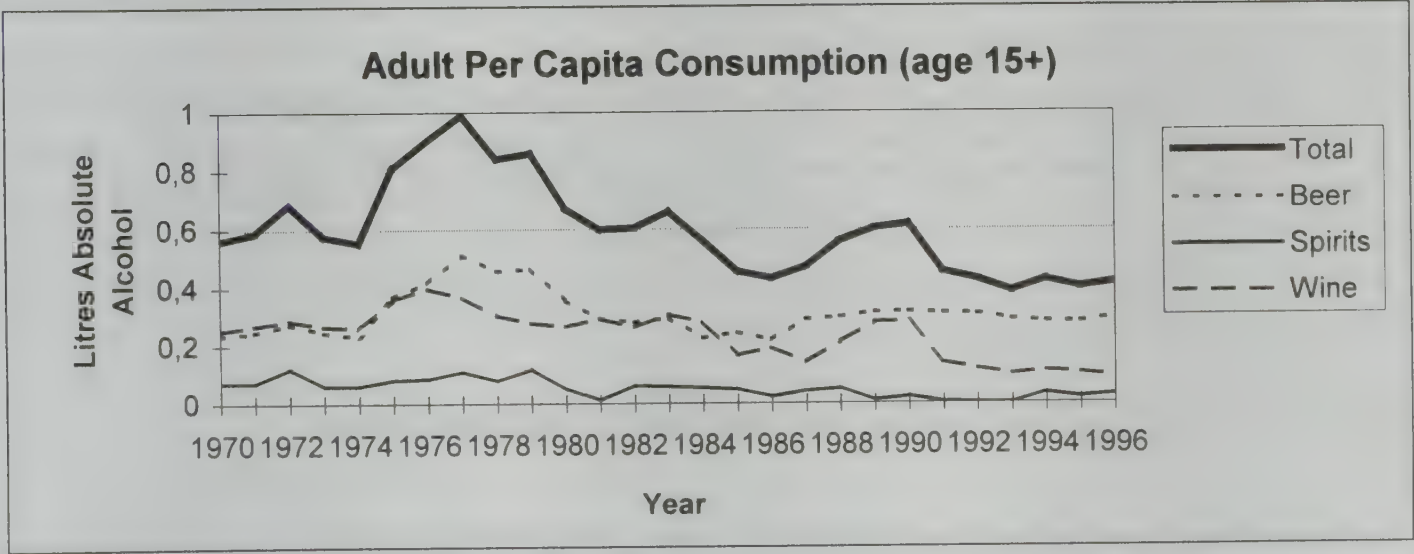
Health status

Life expectancy at birth, 1990-1995 : 48.3 (males), 50.3 (females)
Infant mortality rate in 1990-1995 : 68 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 600, PPP estimates of GNP per capita (current int'l \$), 1995: 1780.
Average distribution of labour force by sector, 1990-1992 : agriculture 81%; industry 6%; services 13%
Adult literacy rate (per cent), 1995 : total 33; male 43; female 23

Alcohol consumption and prevalence



Consumption

Recorded consumption has fallen in every category from its high point in 1977. Recorded spirits consumption is below 0.1 litres of absolute alcohol. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Alcohol policies

Alcohol data collection, research and treatment

Treatment is provided only in the psychiatric services of Fann University Hospital.

Seychelles

Sociodemographic characteristics

POPULATION	1980	1990	1994
Total	N/A	70 000	73 000
Adult (15+)	N/A	N/A	69 000
% Urban	40.0	49.8	54.5
% Rural	60.0	50.2	45.5

Socioeconomic situation

GNP per capita (US\$), 1991: 5070, PPP estimates of GNP per capita (current int'l \$), 1991: 3683
Adult literacy rate (per cent), 1995 : 79%

Alcohol production, trade and industry

Seychelles produces, imports and exports beer, and imports wine and spirits. South African Breweries owns a 20 per cent share of Seychelles Breweries, Ltd.

Alcohol consumption and prevalence

Consumption

In 1989, recorded production and trade figures indicate that adults consumed approximately 4.84 litres of absolute alcohol per capita. Beer is overwhelmingly the alcoholic beverage of choice, with spirits a distant second. The Seychelles Heart Study estimated that a large amount of alcohol (approximately 56 per cent) is derived from home brews. This would suggest that actual adult per capita consumption of pure alcohol is closer to 11 litres.

Prevalence

Men do the bulk of the drinking. A 1991 randomised cross-sectional survey of 1309 adults found that 75 per cent of the male population were regular alcohol consumers, with 19 per cent of the men consuming more than 100 grams of alcohol per day.

The 1994 Seychelles Heart Study II involved an age and sex stratified random sample of all residents aged 25 to 64 years living on the island of Mahe. One hundred and sixty persons were selected randomly within eight strata grouped by ten-year age cohort and by sex. High average consumption was found in men but not in women. Around 20 per cent of men reported drinking more than 100 ml of alcohol a day. Fourteen per cent of men and 46 per cent of women were abstainers, while 30 per cent of men and 3.7 per cent of women drank almost every day.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

A cross-sectional survey of patients admitted to hospital in 1989 found that 28 per cent of males and 13 per cent of female patients had elevated BACs at the time of admission. Overall, one third of all male medical admissions were due to alcohol-related disease. In 1989, 96 patients were diagnosed with alcohol-related cardiomyopathy.

Mortality

A retrospective review of medical records in 1989 reported that pathological effects of alcohol consumption were present in 47 per cent of those autopsied. Twenty per cent showed evidence of alcohol-related cardiomyopathy.

Alcohol policies

Control of alcohol products

The price of alcohol in Seychelles ranks high internationally. The government imposes taxes which range from 15 per cent to 500 per cent depending on the level of alcohol content. No alcohol may be sold to anyone under 18 years of age.

Control of alcohol problems

Driving under the influence of alcohol is strictly prohibited, and violators may be prosecuted. Police use breathalysers or administer a medical check-up to assess whether an offence has been committed.

Alcohol data collection, research and treatment

A national body on alcohol and other drugs was set up by the President to handle all issues concerning alcohol and other drugs.

Sierra Leone

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 236 000	3 999 000	4 509 000
Adult (15+)	1 841 000	2 255 000	2 518 000
% Urban	24.5	32.2	36.2
% Rural	75.4	67.8	63.8

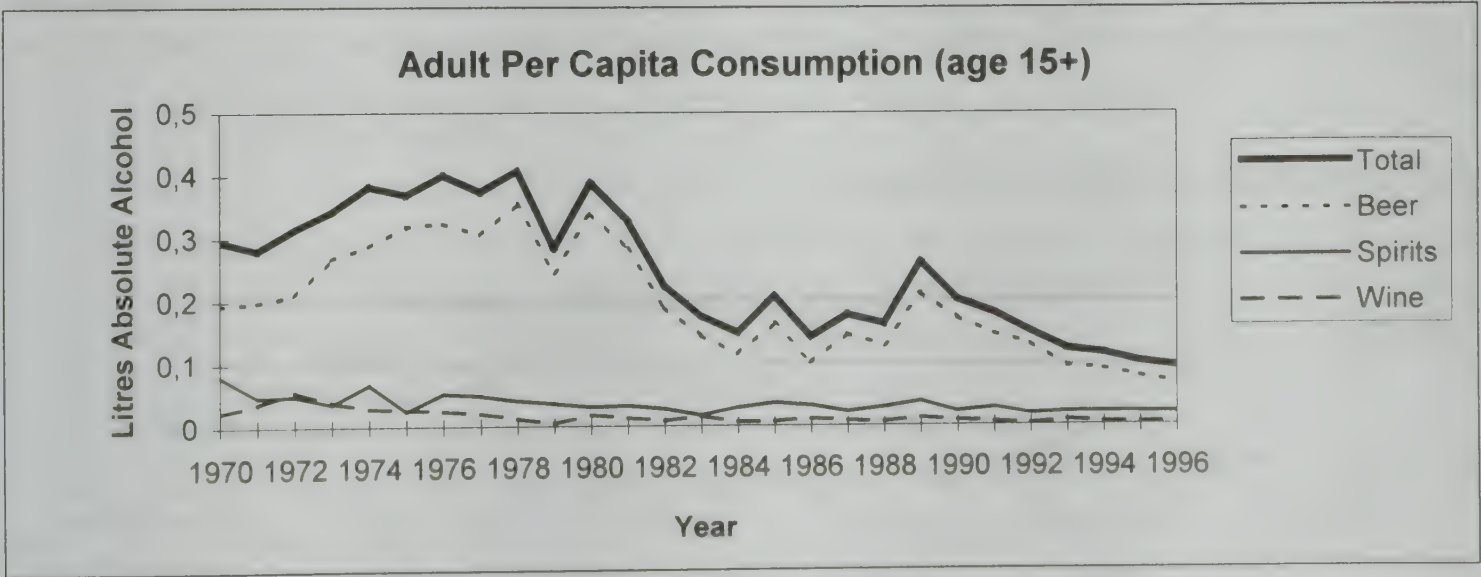
Health status

Life expectancy at birth, 1990-1995 : 37.5 (males), 40.6 (females)
Infant mortality rate in 1990-1995 : 167 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 180, PPP estimates of GNP per capita (current int'l \$), 1995: 580.
Average distribution of labour force by sector, 1990-1992 : agriculture 70%; industry 14%; services 16%
Adult literacy rate (per cent), 1995 : total 31; male 45; female 18

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption has declined fairly steadily from its high point in 1978, mainly as a result of a decline in recorded beer consumption. Recorded wine and spirits consumption comes

entirely from imports. There is no information available on consumption of home- or informally-produced alcohol.

South Africa

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	29 170 000	37 066 000	41 465 000
Adult (15+)	17 418 000	22 882 000	26 006 000
% Urban	48.1	49.2	50.8
% Rural	51.9	50.8	49.2

Health status

Life expectancy at birth, 1990-1995 : 60 (males), 66 (females)

Infant mortality rate in 1990-1995 : 53 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 3160, PPP estimates of GNP per capita (current int'l \$), 1995: 5030.

Average distribution of labour force by sector, 1990-1992 : agriculture 13%; industry 25%; services 62%

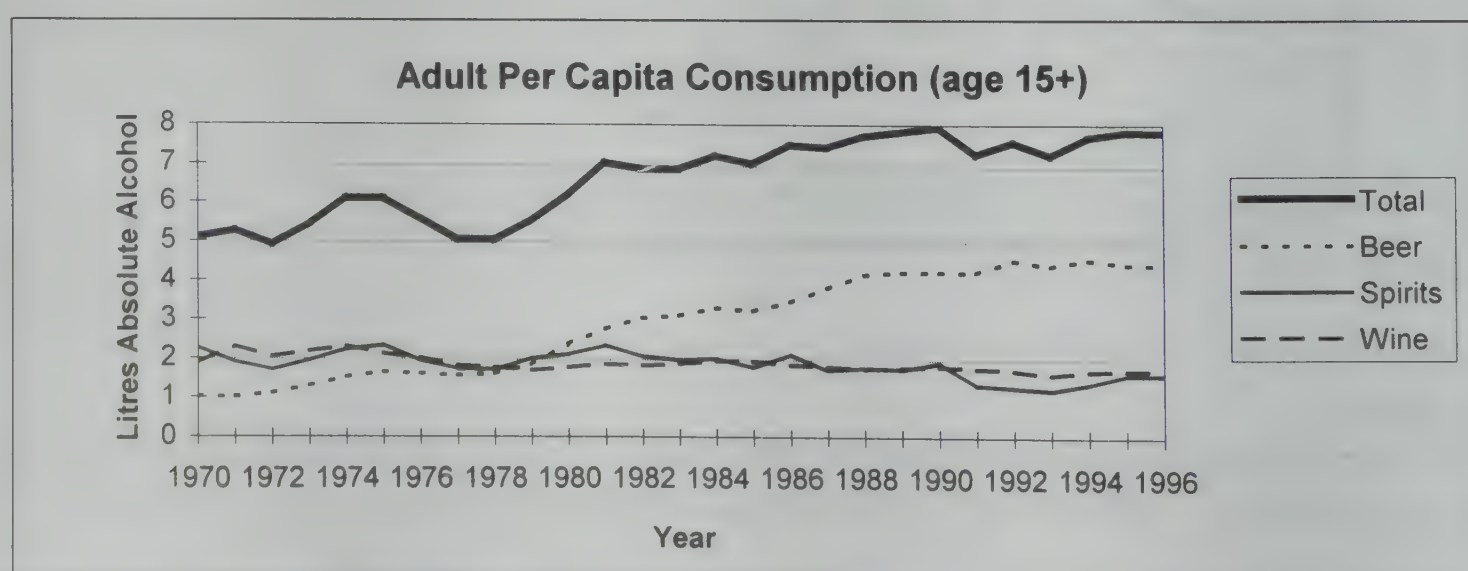
Adult literacy rate (per cent), 1995 : male 82; female 82; total 82

Alcohol production, trade and industry

South Africa has a thriving alcohol production industry, which is a major source of employment and tax revenue. The market is dominated by five companies. Gilbey's Brewery is jointly owned by Grand Metropolitan and the partnership of Rembrandt-Rothman and KWV, the national grape-growers' cooperative. Rembrandt-Rothman also owns controlling interests in Stellenbosch Farmers Winery and Distillers Corporation. National Sorghum Brewery (NSB) controls 90 per cent of the sorghum-based beer market. NSB recently sold a controlling stake to The UB Group of India.

There are roughly 107 000 employees of the South African Breweries (SAB), South Africa's third largest conglomerate. SAB has a clear beer market share of 95 per cent. A government regulation restricting SAB's sorghum-based beer marketing to the former *bantustans* only was lifted in 1995. The wine industry provides an income to 5000 farmers, 3000 cooperative cellar staff and 42 000 farm labourers (1992 figures). In 1996 there were 22 853 licensed retail liquor outlets in South Africa. In 1997, the country had an estimated total of 250 000 liquor outlets, less than 10 per cent of which were licensed.

Alcohol consumption and prevalence



Consumption

According to figures from the South African business press, total adult per capita consumption of pure alcohol in 1995 was 10 litres. Beer consumption has been rising steadily since 1970, at the same time that malt beer's share of total beer consumption has grown from 15.5 to 56 per cent.

Prevalence

Men drink on average 15 to 20 per cent more than women. Among adults, several studies have found approximately 30 per cent of Black African males in townships and squatter camps drink at risky levels. In contrast, studies have classified from 5 to 20 per cent of females as risky drinkers. Men in the Cape Peninsula were more than five times as likely to drink heavily on the weekend (26.7 per cent) than on weekdays (five per cent).

Age patterns

Binge drinking tends to increase with age. A survey of young black urban and rural persons between the ages of 10 and 21 found that 4.4 per cent of urban males, 1.9 per cent of urban females, 7.8 per cent of rural males and 1.8 per cent of rural females were drinking at risky levels (averaging the equivalent of more than five beers per day). Another study of Black Africans 14 years and older found a substantially greater percentage of males in urban areas drinking at risky levels as compared to males in predominantly rural areas (30 per cent versus 10 per cent). The corresponding figures for females were 12 to 17 per cent for females in urban areas as compared with one to two per cent for females in predominantly rural areas.

Alcohol use among population subgroups

Among high school males surveyed in the Cape Peninsula, Whites are most likely to drink heavily (defined as five or more drinks at one sitting at least once in the past 14 days), followed closely by Black Africans and then by Coloureds. Black African females are least likely to drink heavily. Another study of White students in 200 schools found that 10.3 per cent were drinking on two or more days a week, while a random sample of study of high school students in the Cape Peninsula showed that English-speaking students had higher drinking rates than Afrikaans- or Xhosa-speaking students. Among adults, urban general population surveys from the 1980s found that African males were most likely to drink heavily (14.6 per cent), followed by Coloureds (8.1 per cent), Indians (5.4 per cent) and Whites (1.8 per cent).

In a study of workers in a South African gold mine, 43 per cent reported drinking more than four drinks a day, and the average amount of alcohol sold per drinker per day was in excess of 37 grams.

Economic impact of alcohol

In 1992, South Africans spent 429.2 million rand on alcoholic and non-alcoholic beverages, equal to seven per cent of their total consumer expenditure. The total cost of alcohol misuse was estimated in 1985 to be R1.2 billion per year. This figure was based on estimates of lost productivity, alcohol-related health and medical expenses, car crashes, violence, crime, fire damage and costs of alcohol programmes. A 1994 study of sick leave patterns among workers in a sawmill determined that 17 per cent of sick days were alcohol-related.

The economic costs associated with alcohol abuse are likely to be in excess of 2 per cent of GNP (US\$1.7 billion) per year. This may be an underestimate if information collected by the Medical Research Council's (MRC) National Trauma Research Programme is considered, which suggests that alcohol-related costs associated with pedestrian trauma alone are in excess of US\$ 83 million per year. Furthermore, the Minister of Transport has estimated that motor vehicle collisions cost the country US\$ 1.5 billion per year and that at least half of these are alcohol-related.

Revenue from alcohol excise taxes was estimated to be roughly US\$ 570 million in 1996. Public sector spending on research into alcohol abuse is likely to be under US\$ 1 million per year.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1992 hospital study showed the incidence of alcohol dependence in adult patients presenting with burns to be 57 per cent. Among patients hospitalised for tuberculosis in Cape Town, more than 30 per

cent of Black Africans and approximately 60 per cent of Coloureds registered positive scores on both the CAGE and the AUDIT questionnaires measuring alcohol dependence.

Mortality

Alcoholic cirrhosis of the liver was cited as a cause of death in 272 persons in 1992. Alcohol was present in 62.9 per cent of homicide victims in a 1986 Cape Town study. In a study of 2980 medicolegal autopsies carried out between 1985 and 1989, alcohol was found in 41.3 per cent of the vehicular deaths. Autopsies of drowning and burn victims have also shown alcohol present in more than 60 per cent of deaths.

Morbidity

A study of three regions (one urban, one rural and one urban-rural) found the percentage of alcohol users among oesophageal cancer patients was 84 per cent, 91 per cent and 57.5 per cent respectively. Eighteen per cent of work-related injuries in a sample of patients attending a company clinic were related to alcohol. Hospital studies have found that 67 per cent of victims of assaults and vehicular injuries have BACs in excess of 0.08 g %.

Social problems

Sixty-nine per cent of women abused by their spouses reported alcohol and/or drug abuse to be a main cause of conflict leading to abuse in an interview survey. In 1990, 67.4 per cent of domestic violence in the Cape metropolitan area was estimated to be alcohol-related, as was 76.4 per cent of domestic violence in rural areas of the south-western Cape in 1992.

In 1988, 25 682 people were arrested for drunk driving, a decrease from 29 299 in 1987. Studies of drinking among drivers and pedestrians in Cape Town have found that 16 per cent of pedestrians and seven per cent of drivers on the roads after 17:00 hours on a typical workday are intoxicated. Approximately 16 per cent of motor vehicle crashes were alcohol-related in 1987, and an estimated 50 per cent of all traffic crashes involving pedestrians are alcohol-related.

Alcohol policies

Control of alcohol products

Prohibition was repealed for Black Africans in 1961. Retail prices are not subject to price control. However, a minimum price is determined each year for producer sales of wine by KWV, the Wine Growers Cooperative. This price must be approved by the Minister of Agriculture. Since 1980, the beer excise tax has lagged behind the consumer price index. Taxes are 31 per cent of the price of spirits, 30 per cent of the price of beer and 13 per cent of the price of wine. Excise duties on wine were re-introduced in 1992. As of October, 1991, alcoholic beverages became subject to a value added tax of 10 per cent (later increased to 14 per cent).

A licence for the on or off-premise sale of alcohol is required. The licensing system is controlled by the Liquor Board which falls under the jurisdiction of the Department of Trade and Industries. Sale of alcohol is prohibited on Sunday, and no sales are permitted to those under 18 years of age. It is expected that a new Liquor Act will be passed in 1998 which will make Sunday trading permissible throughout the country. South Africa's liquor law is currently under review, as the country tries to bring under state control an estimated 230 000 unlicensed liquor outlets.

Advertising of alcoholic beverages is permitted, but advertisements may not be aimed at children. They may not feature children or be aired during a children's programme or on any medium aimed at children. The advertisements must not depict pregnant women and they may not mention alcohol content, nor may they feature or foster irresponsible drinking. They should not encourage the operation of a vehicle or machine, and they may not set out to encourage a general increase in the consumption of alcohol.

Control of alcohol problems

In 1998, it is expected that the maximum permissible blood alcohol level for drivers will be decreased to 0.05 g%. At the same time, it is probable that the results of breath alcohol testing will be made permissible in court. The "I'm addicted to life" campaign was introduced into schools, and a Soul City TV soap opera series was introduced in 1997 to address alcohol misuse. As of 1997 South Africa did not have an integrated national alcohol/drug strategy. Currently, the country only has a Drug

Advisory Board (falling under the Ministry of Welfare) comprising representatives from a variety of government departments and NGOs. It is probable that a national drug (and alcohol) master plan will be presented to Parliament in 1998. It has been proposed that a Central Drug Authority be established under the office of the Deputy President to drive the implementation of the master plan.

Alcohol data collection, research and treatment

There is a wide variety of data research and treatment agencies. The MRC and the Human Science Research Council are the two lead agencies involved in substance abuse research in South Africa. SANCA, a governmentally funded nongovernmental organization responsible for drugs and alcohol, received nine million rand from the state in 1990. The Institute for Health Training and Development was formally launched in 1995 to provide specialized training, consultation and development services regarding prevention and treatment of substance abuse. The public sector spends approximately three million rand each year on research into alcohol abuse. There is a shortage of personnel sufficiently trained to deal with problem drinking.

During 1996 there were major reductions in the funding of alcohol-related treatment centres. Many primary health care clinics are being built and the intention is to have primary health care nurses trained to detect, manage and refer patients with alcohol problems.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from South Africa.

Swaziland

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	560 000	744 000	855 000
Adult (15+)	303 000	410 000	486 000
% Urban	17.9	26.4	31.2
% Rural	82.2	73.6	68.8

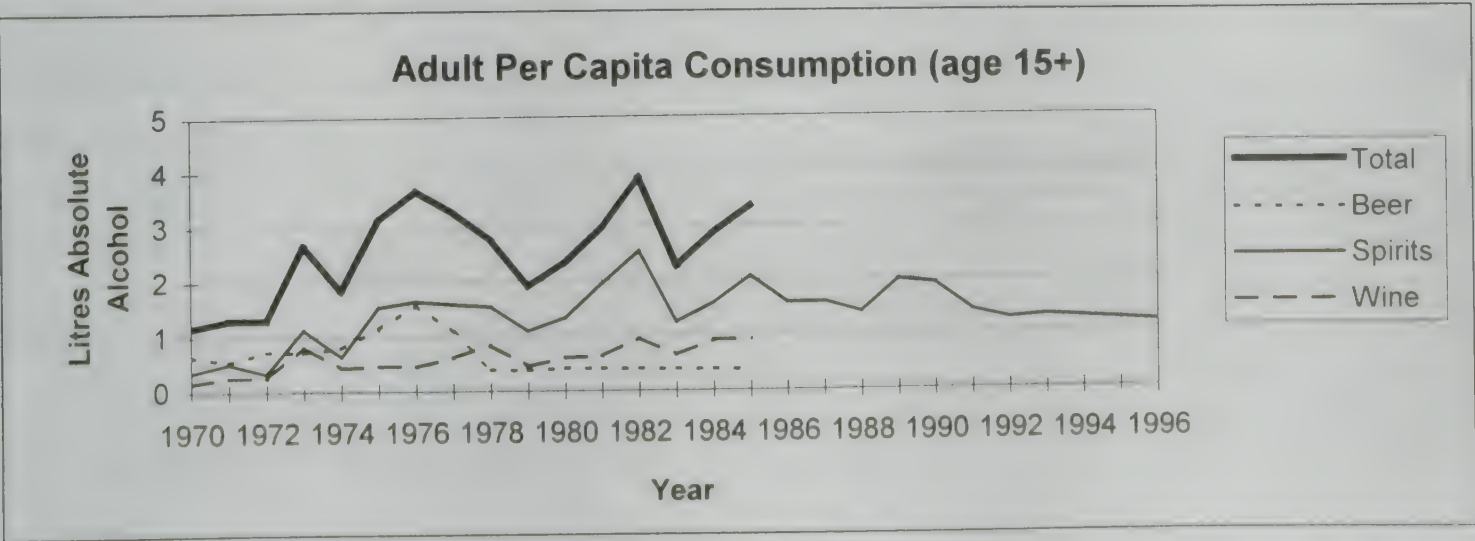
Health status

Life expectancy at birth, 1990-1995 : 55.2 (males), 59.8 (females)
Infant mortality rate in 1990-1995 : 75 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1170, PPP estimates of GNP per capita (current int'l \$), 1995: 2880.
Average distribution of labour force by sector, 1990-1992 : agriculture 74%; industry 9%; services 17%
Adult literacy rate (per cent), 1995 : total 77; male 78; female 76

Alcohol consumption and prevalence



Consumption

Recorded consumption comes entirely from imported beverages. There are no data available on beer and wine imports after 1985. There is no information available regarding consumption of smuggled or home- or informally-produced alcohol, but it is estimated to be substantial.

Age patterns

In a 1991 study of 16 Swaziland secondary and high schools, 22 per cent of girls and 7.5 per cent of boys stated they were regular drinkers, and 16 per cent of girls and 20 per cent of boys started drinking by the age of 15.

In 1989, 68 per cent of second-form students (aged about 13) from three schools in the working-class urban area of Mbabane reported never drinking alcohol, 25 per cent were "rare" drinkers and 3 per cent said they drank frequently.

Mortality, morbidity, health and social problems from alcohol use**Alcohol dependence and related disorders**

The mental health hospital figures for patients diagnosed with psychosis directly related to alcohol dependence were fairly constant in the late 1970s, at 20 to 25 per cent of admissions.

Mortality

Alcohol was present in about 60 per cent of the 97 cases of murder or culpable homicide heard in the judicial system from the beginning of 1978 through November of 1979,

Morbidity

The percentage of liver cirrhosis cases connected to alcohol between 1973 and 1982 ranged from 0.1 per cent to 0.4 per cent.

Health problems

In 1990, psychiatric hospitals diagnosed 29.3 per cent of admissions as alcohol related.

Alcohol policies**Control of alcohol problems**

The maximum BAC for driving under the influence of alcohol is 0.15 g%. As of 1991, there had been no drunk-driving prosecutions or convictions since 1968. The Health Education Unit of the Ministry of Health sponsored Alcohol-Drug Awareness Week. The Urban Regulations state that "no person shall be or appear in any public place or place of public resort, whether a building or not, in a state of intoxication."

Alcohol data collection, research and treatment

The Swaziland Mental Health Society is a NGO which operates under the umbrella of another NGO, the National Council on Smoking, Alcohol and Drug Dependence (COSAD).

Alcoholics Anonymous, Alanon and Alateen are available as well as clinics throughout the country that handle outpatients with alcohol-related disorders. The National Psychiatric Centre is a facility that specialises in the treatment drug and alcohol problems.

Togo

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 615 000	3 531 000	4 138 000
Adult (15+)	1 452 000	1 933 000	2 245 000
% Urban	22.9	28.5	30.8
% Rural	77.1	71.6	69.2

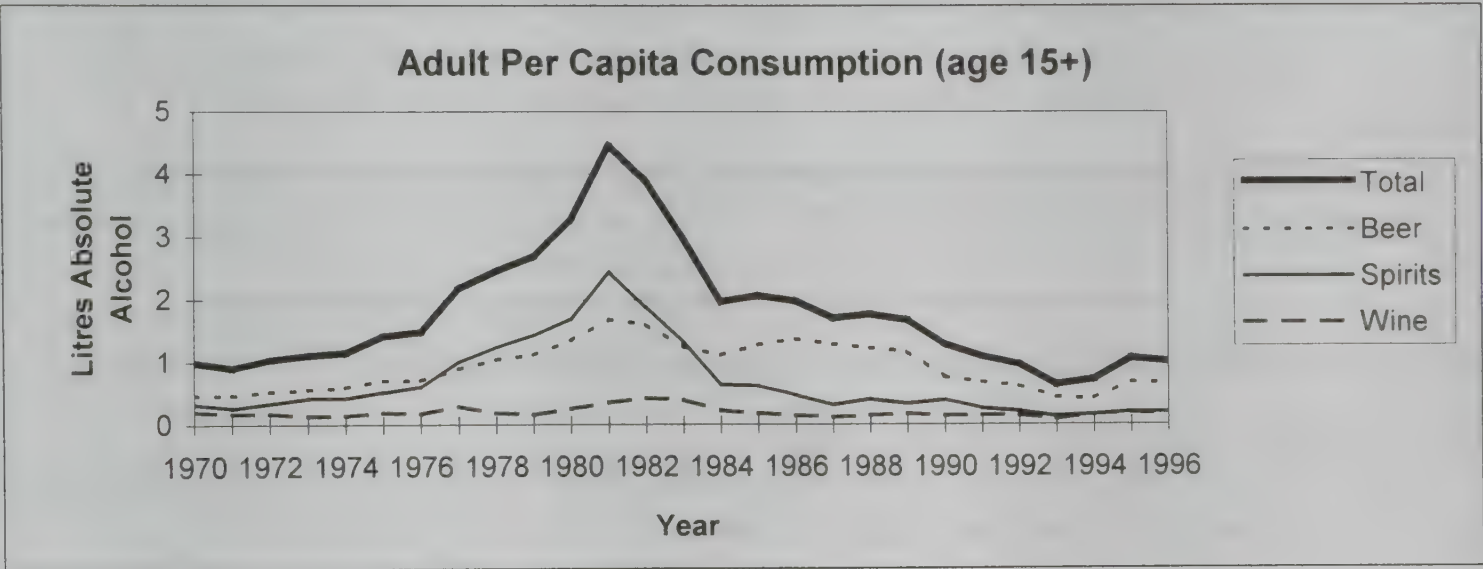
Health status

Life expectancy at birth, 1990-1995 : 53.2 (males), 56.8 (females)
Infant mortality rate in 1990-1995 : 85 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 310, PPP estimates of GNP per capita (current int'l \$), 1995: 1130.
Average distribution of labour force by sector, 1990-1992 : agriculture 65%; industry 6%; services 29%
Adult literacy rate (per cent), 1995 : total 52; male 67; female 37

Alcohol consumption and prevalence



Consumption

After peaking in 1981, recorded alcohol consumption in Togo has fallen to less than a fourth of its former level. There is no information available on consumption of home- or informally- produced alcohol.

Uganda

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	13 120 000	17 949 000	21 297 000
Adult (15+)	6 848 000	9 256 000	10 907 000
% Urban	8.8	11.2	12.5
% Rural	91.2	88.8	87.5

Health status

Life expectancy at birth, 1990-1995 : 43.6 (males), 46.2 (females)
Infant mortality rate in 1990-1995 : 115 per 1000 live births

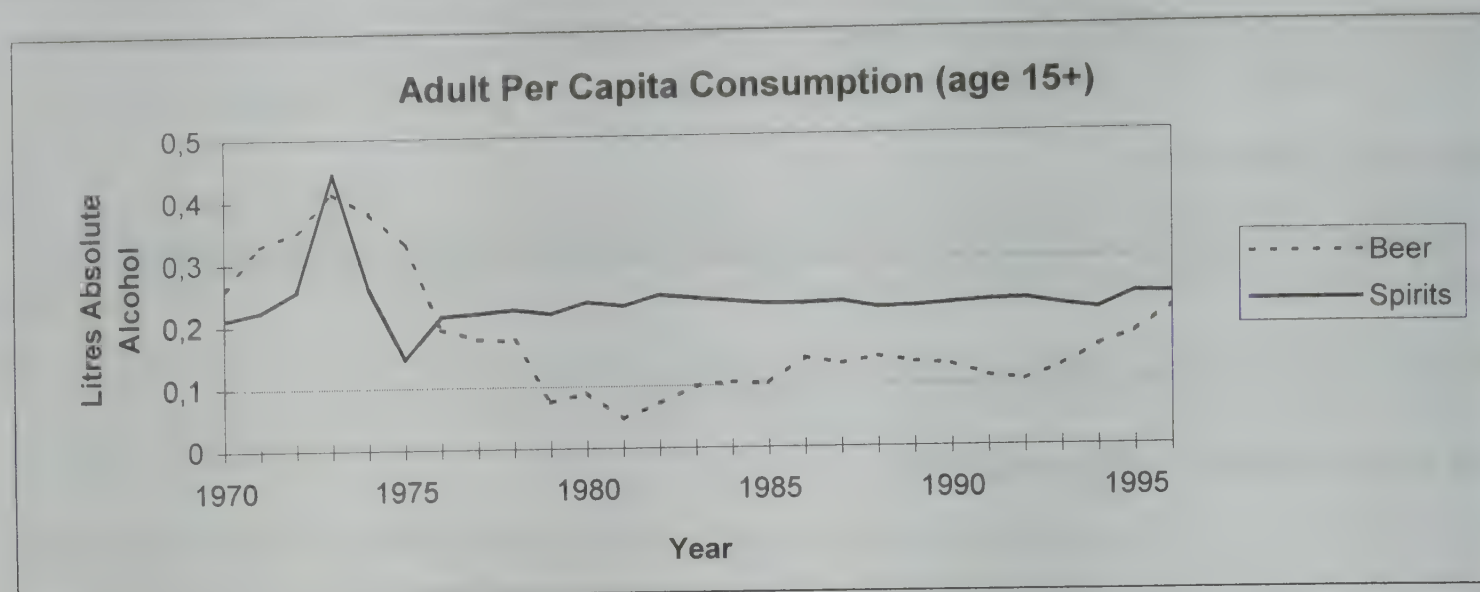
Socioeconomic situation

GNP per capita (US\$), 1995: 240, PPP estimates of GNP per capita (current int'l \$), 1995: 1470.
Average distribution of labour force by sector, 1990-1992 : agriculture 86%; industry 4%; services 10%
Adult literacy rate (per cent), 1995 : total 62; male 74; female 50

Alcohol production, trade and industry

Uganda produces beer and distilled spirits. One of the country's breweries is owned by South African Breweries.

Alcohol consumption and prevalence



Consumption

Recorded beer consumption has risen sharply recently. Ugandans drink very little wine, and recorded spirits consumption has remained steady over the past two decades. There is no information on consumption of smuggled or home- or informally-produced alcoholic beverages.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1985 study of 94 male patients admitted to a psychiatric hospital found that patients diagnosed with alcohol psychosis made up 8.4 per cent of admissions.

United Republic of Tanzania (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	18 581 000	25 600 000	29 685 000
Adult (15+)	9 738 000	13 759 000	16 072 000
% Urban	14.8	20.8	24.4
% Rural	85.3	79.2	75.7

Health status

Life expectancy at birth, 1990-1995 : 50.5 (males), 53.6 (females)

Infant mortality rate in 1990-1995 : 85 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 120, PPP estimates of GNP per capita (current int'l \$), 1995: 640.

Average distribution of labour force by sector, 1990-1992 : agriculture 85%; industry 5%; services 10%

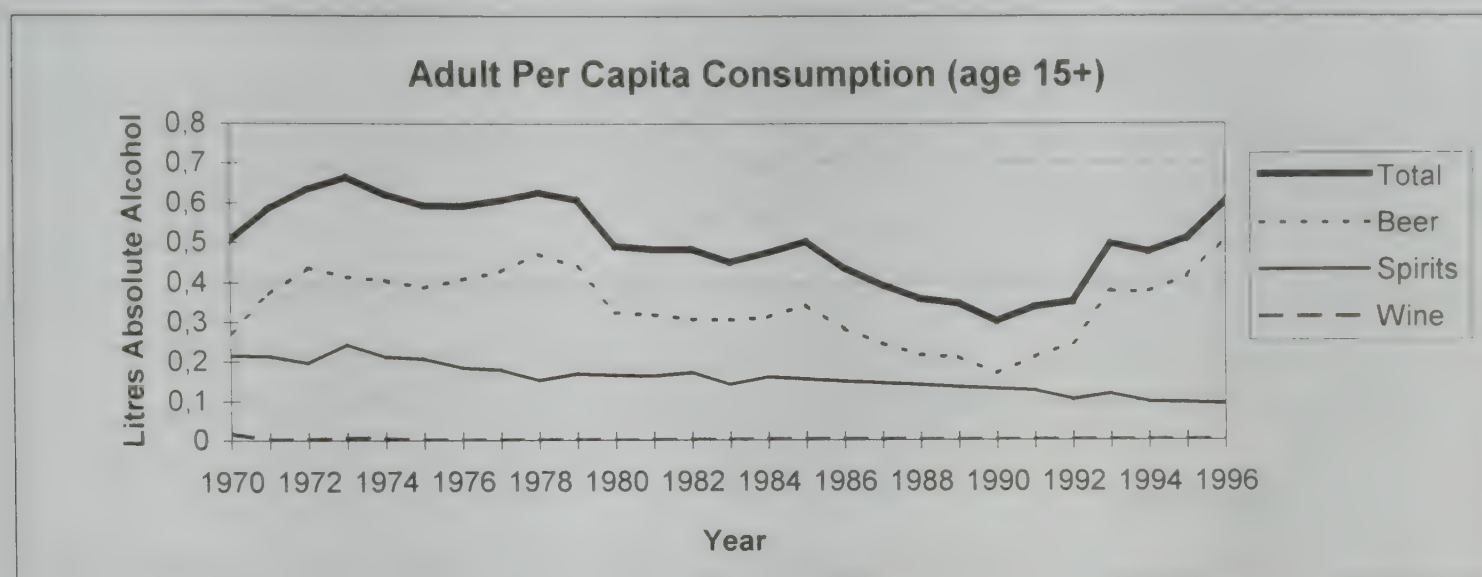
Adult literacy rate (per cent), 1995 : total 68; male 79; female 57

Alcohol production, trade and industry

At the time of independence in 1961, the breweries and wineries were privately owned. Since then, the government has acquired majority shares and developed DOWICO, encouraging farmers to grow grapes in Central Tanzania. South African Breweries, in a US\$ 27 million joint venture with the Tanzanian Government, owns 50 per cent of a 480 000 hectolitre brewery. Tanzania Breweries Limited (TBL) is a state corporation which handles much of the country's beer distribution. In some remote areas, the company tenders the distribution to private agents. In 1995, TBL received

US\$ 13 million in loans, US\$ 4.4 million in syndications and US\$ 6 million in equity from the International Finance Corporation.

Alcohol consumption and prevalence



Consumption

Beer leads recorded alcohol consumption. However, the figures above are certainly an underestimate of actual consumption. *Pombre*, a traditional brew, represents an estimated 89 per cent of the alcohol consumed in the country. If this amount alone (excluding other home or informal production) were added to recorded production, adult consumption of pure alcohol in 1996 would be approximately 5.45 litres.

Prevalence

A study (reported in 1998) selected 148 men and 162 women by cluster sampling from the population (9243) of four villages in the Misungwi subdistrict in the Mwanza region of Tanzania. Fifty-five per cent of the men and 33 per cent of the women had consumed alcohol at least once during the year prior to the interview. Twenty-four per cent of the men and six per cent of the women had consumed alcohol on six or more occasions during the past month. The quantity of alcohol consumed at the last sitting and in the month prior to the interview was twice as high among male compared to female respondents. The frequency and quantity of alcohol consumption per month increased with age for men but not for women.

Mortality, morbidity, health and social problems from alcohol use

Mortality/Morbidity

Between 1981 and 1985 alcohol was associated with 305 manslaughter cases and 17 per cent of assault cases.

Alcohol policies

Control of alcohol products

The Government collects 100 per cent sales tax on wine, and considerably more on beer (593 per cent in 1981). The commercial sale of traditional brews is regulated by the Liquor Licensing Law. The 1972 amendments to the Intoxicating Liquors Act of 1968 restrict opening hours of alcoholic beverage outlets to between 18:00 and 23:00 hours on week days in urban areas and 15:00 to 20:00 hours in rural areas. Weekend and holiday hours are 11:00 to 14:00 hours and again at 18:00 hours to midnight. The minimum legal drinking age is 16.

Alcohol data collection, research and treatment

Treatment of problem drinkers is done primarily through psychotherapy and family therapy at the major hospitals. Some patients are admitted for a brief detoxification period before continuing with treatment on an outpatient basis. Tanzania lacks special alcohol treatment centres or family guidance clinics. There are a few Alcoholics Anonymous groups, but the network is not well organized.

Zambia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 738 000	8 150 000	9 456 000
Adult (15+)	2 904 000	4 245 000	4 973 000
% Urban	39.8	42.0	43.0
% Rural	60.2	58.0	57.0

Health status

Life expectancy at birth, 1990-1995 : 48 (males), 49.7 (females)

Infant mortality rate in 1990-1995 : 104 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 400, PPP estimates of GNP per capita (current int'l \$), 1995: 930.

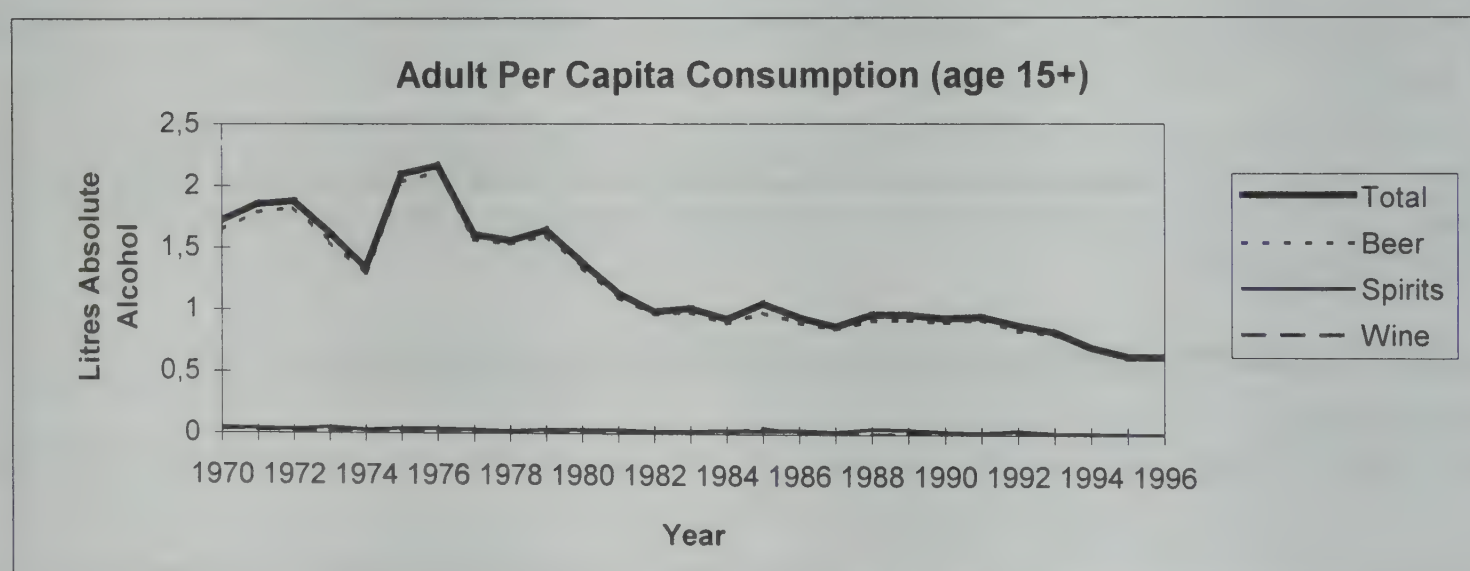
Average distribution of labour force by sector, 1990-1992 : agriculture 38%; industry 8%; services 54%

Adult literacy rate (per cent), 1995 : total 78; male 86; female 71

Alcohol production, trade and industry

South African Breweries, through their subsidiary, Indol International BV, holds 45 per cent of a 360 000 hectolitre brewery in partnership with the government and Anglo American Corporation.

Alcohol consumption and prevalence



Consumption

Recorded consumption comes almost entirely from beer. There is no information available regarding consumption of smuggled or informally- or home-produced alcohol.

Prevalence

In a 1991 survey in the capital city of Lusaka, 45 per cent of men and 11 per cent of women (23 per cent of the total sample) described themselves as weekly drinkers. Thirty-five per cent of men and 70 per cent of women (58 per cent of total) claimed to never drink. A 1978 survey looked at drinking in urban, peri-urban and rural settings. The majority of women in all three communities said they did not drink. The heaviest drinkers were rural non-religious men, while the highest number of male abstainers resided in the urban community.

Age Patterns

A 1982 survey found that 57 per cent of the secondary school male students in Lusaka had used alcohol. The 1978 survey reported that consumption of alcohol increased with age.

Economic impact of alcohol

A longitudinal study of alcohol in a single rural village found that gross personal income from the sale of village beer increased from K1.80 (US\$ 0.0009) in 1963 to K20.00 (US\$ 0.01) in 1982.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of total admissions diagnosed as alcohol dependent at Chainama Hills Hospital in Lusaka fell from 16 per cent in 1986 to 14 per cent in 1987.

Morbidity

In 1988 the results of alcohol studies in workers of a Zambian copper mine showed that 30 per cent of accident cases showed evidence of alcohol in their bloodstream.

Social problems

In 1985, approximately 33 per cent of police incidents were thought to have involved alcohol, with assault as the most common offence. The annual rate of drunk and disorderly convictions per 1000 drinkers fell from 8.3 in 1970 to 7.5 in 1989.

Alcohol policies

Alcohol data collection, research and treatment

The Zambia National Commission for the Prevention of Alcoholism and Drug Abuse was established in 1987 as a national chapter of the International Commission for the Prevention of Alcoholism and Drug Abuse.

Zimbabwe

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	7 126 000	9 903 000	11 261 000
Adult (15+)	3 715 000	5 507 000	6 296 000
% Urban	22.27	28.54	32.14
% Rural	77.73	71.46	67.86

Health status

Life expectancy at birth, 1990-1995 : 52.4 (males), 55.1 (females)
Infant mortality rate in 1990-1995 : 67 per 1000 live births

Socioeconomic situation

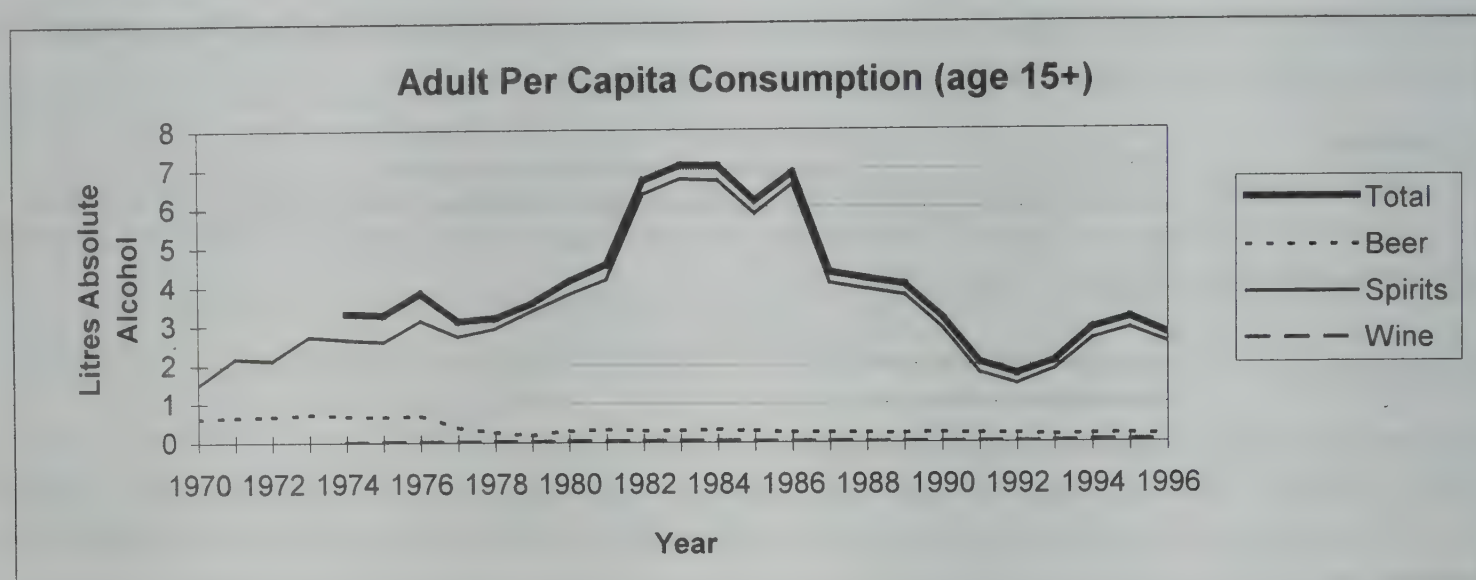
GNP per capita (US\$), 1995: 540, PPP estimates of GNP per capita (current int’l \$), 1995: 2030.
Average distribution of labour force by sector, 1990-1992 : agriculture 71%; industry 8%; services 21%
Adult literacy rate (per cent), 1995 : total 85; male 90; female 80

Alcohol production, trade and industry

Production of beer, wine and spirits is Zimbabwe’s fourth largest manufacturing industry in terms of retail sales receipts. Legal alcohol sales total 3.7 per cent of the nation’s gross domestic product, and the national government receives close to four per cent of its revenues from alcohol. Beerhalls were still under the jurisdiction of municipal governments as of late 1996, although plans were being made for privatization. In the capital city of Harare, revenue from the beerhalls contributed two per cent of the city’s overall budget in 1992.

Three companies produce nearly all of Zimbabwe's legal opaque beer, clear beer and wine and spirits with South African Breweries having an interest in all three. South African wine and spirits companies as well as Grand Metropolitan have interests in the country's largest distiller, African Distillers, which produces or imports 95 per cent of the country's wine and spirits. There are sixteen breweries in the country producing traditional African-style opaque beer, these being owned by Chibuku Breweries, which is controlled by the Zimbabwe government. A competitor owns two more similar breweries. National Breweries, also controlled by Zimbabwe's government, has a modernized three million hectolitre brewhouse in Harare and opened up a bottling line in Bulawayo.

Alcohol consumption and prevalence



Consumption

Estimated per capita consumption of absolute alcohol among urban Black Africans was 16 litres per adult (age 15+) in 1969. The corresponding figure for Europeans, Asians and Coloureds was 9.2 litres. Consumption of opaque sorghum-based African-style beer or clear, barley-based European-style lager beer seems to have fluctuated over time according to the economic fortunes of the country. There is no reason to assume that the high levels of per capita consumption have moderated in the past thirty years, which suggests substantial under-reporting in the graph above.

Prevalence

When people drink in Zimbabwe, they tend to drink heavily. Men are more likely to drink than women. There are no recent general population surveys available. A 1992 survey of junior hospital workers in Harare found that 93 per cent of male and 64 per cent of female current drinkers drank to intoxication every time they drank. Forty-one per cent of a sample of consecutive patients attending primary care clinics in Harare in 1989 were current drinkers. Of these, 60 per cent habitually drank to intoxication (more than 10 units), and 39 per cent drank at least three or more times per week. Thirty-eight per cent were classified as "bout" drinkers, consuming 21 or more units per heavy drinking session. Heavy drinking sessions were most likely to occur around weekly or monthly pay days. Thirteen per cent of the drinkers drank heavily three or more times a week. A study of industrial workers conducted by the Ministry of Health in 1989 found that of the 74 per cent who drank alcohol, 66 per cent drank every weekend, and 22 per cent (16 per cent of the entire sample) drank daily. Among communal drinkers (those who drink from a common container or at communal events, usually in the rural areas), one study found that 89 per cent of drinkers reported becoming at least moderately drunk on each drinking occasion.

Age Patterns

A random survey of more than 2500 schoolchildren between the ages of 12 to 21 found that 32 per cent of boys and 28 per cent of girls had tried alcohol. Alcohol was the drug most commonly used by all the schoolchildren, and was more common among male than female students, and in private than public schools. Students with more European attitudes and tastes were likely to drink more than those who adhered to Zimbabwean customs. A comparison between Zimbabwean and British university students found that fewer Zimbabweans (particularly females) drink, but those who do drink more and get drunk more often. A 1996 study gave lifetime alcohol prevalence levels of 31.1 per cent for

people aged 14 years and older, 39.5 per cent for 15 to 16 year olds, and 46.1 per cent for 17 to 20 year olds.

Economic impact of alcohol

Households spend nearly seven per cent of their annual income on alcoholic beverages.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1989 study of 483 consecutive patients attending primary care clinics in Harare classified 13.2 per cent of current drinkers as dependent (defined as drinking more than 10 units per session three or more times per week). A study of junior hospital workers at Parirenyatwa Hospital in Harare found that five per cent of current drinkers scored very highly on dependence scales in terms of increased tolerance, morning drinking and loss of control, while 72 per cent reported frequent problems as a result of drinking such as injuries, blackouts, guilt feelings and expressions of concern from others about the drinker's alcohol use..

Admissions for alcohol-related diagnoses reportedly accounted for approximately 25 per cent of all psychiatric admissions at Harare's main hospital in the mid-1980s, but this high percentage is not reflected in official hospital admissions figures. A 1993 prospective study in the hospital's psychiatric ward found that 13 per cent of male and two per cent of female patients could be classified as alcohol abusers or dependent.

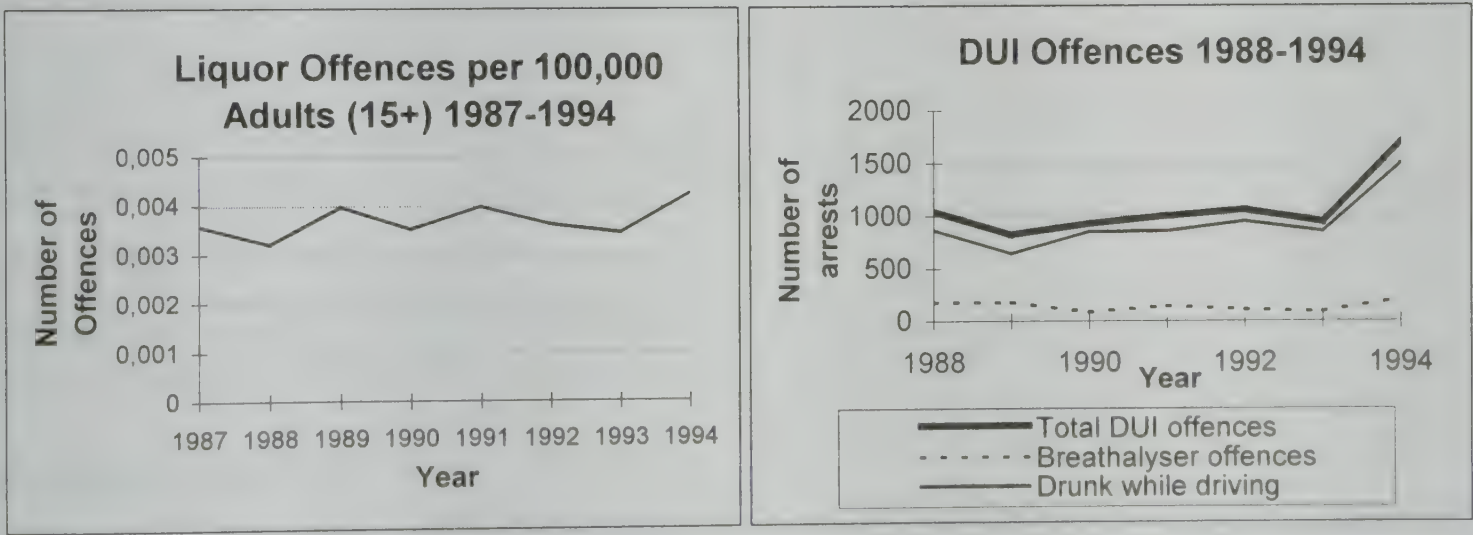
Morbidity

In a study of 483 consecutive patients attending primary care clinics in Harare, more current drinkers than non-drinkers presented sexually-transmitted diseases and work-related injuries.

A retrospective study of 2180 cancer cases in residents of Bulawayo, the second-largest city, found a link between the most common cancer for men (cancer of the liver) and alcohol use, particularly use of local beer; and a link between the most common cancer for women (cancer of the cervix) and alcohol use, increasing with elevated consumption. No significant link was found between alcohol use and cancers of the breast, corpus uteri, lung or bladder.

According to the UN Demographic Yearbook, Zimbabwe reported incidence of chronic liver disease including cirrhosis at 4.14 per 100 000 population in 1986.

Social problems



The national figures for liquor offences shown in the chart above include public drunkenness, running a *shebeen* without permission, and being drunk, violent and disorderly in a public place. Prior to January 1995, each of Zimbabwe's eight provinces had only one breathalyser, resulting in a likely under-reporting of drink-driving.

Alcohol policies

Control of alcohol products

Alcoholic beverage labels must state that alcohol may be hazardous to health if consumed to excess and that the operation of machinery or driving after the consumption of alcohol is not advisable. All establishments selling alcoholic beverages that are members of Harare's Hotel and Restaurant Association have pledged to post a similar warning sign regarding alcohol use wherever alcohol is served.

Tax rates favour the beverages with the lowest alcohol content, particularly traditional opaque sorghum-based beer. An increase in taxes on clear and opaque beer in February 1995 had to be repealed in July of that year after drinkers migrating to lower tax revenues or to illegally-produced beverages caused a significant drop in alcohol tax revenue to the fiscus.

Alcohol outlets must be licensed by the government. A 1994 amendment to the Liquor Act gave rural bottle stores permission to sell alcohol for consumption on premises, waiving the sanitary requirements to provide amenities such as flush toilets and tiled kitchens that apply to urban outlets. In addition, there are many illegal *shebeens*; police made between 2000 and 4000 arrests per year for operating *shebeens* in the early 1990s.

Alcohol data collection, research and treatment

The Medical School at the National University of Zimbabwe runs occasional research studies on alcohol. With assistance from the International Labour Organization, the Department of Social Welfare operates a Resource Centre for Alcohol and Drug Problems that retrains and refers workers with alcohol problems, and mobilises communities to generate locally-initiated prevention campaigns. The Zimbabwe Council on Alcohol and Drug Abuse provides lectures in schools on alcohol and other drug problems on a voluntary basis.

Government treatment facilities are provided in psychiatric wards in general hospitals, which accept patients for detoxification as well. Alcoholics Anonymous has at least eight meetings per week in Harare as well as in other major cities. An independent Christian community in a Harare suburb has beds for nine alcohol and/or other drug dependent people.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Zimbabwe.

Region of the Americas

Antigua and Barbuda

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	N/A	N/A
Adult (15+)	N/A	N/A	N/A
% Urban	34.6	35.4	35.8
% Rural	65.4	64.6	64.2

Alcohol production, trade and industry

Antigua and Barbuda produce and export spirits and wine, and import beer.

Alcohol consumption and prevalence

Consumption

In the absence of population figures, it is not possible to estimate the adult per capita consumption of absolute alcohol in Antigua and Barbuda.

Argentina

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	28 114 000	32 547 000	34 587 000
Adult (15+)	19 540 000	22 586 000	24 651 000
% Urban	82.9	86.5	88.1
% Rural	17.1	13.5	11.9

Health status

Life expectancy at birth, 1990-1995 : 68.6 (males), 75.7 (females)

Infant mortality rate in 1990-1995 : 24 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 8030, PPP estimates of GNP per capita (current int'l \$), 1995: 8310.

Average distribution of labour force by sector, 1990-1992 : agriculture 13%; industry 34%; services 53%

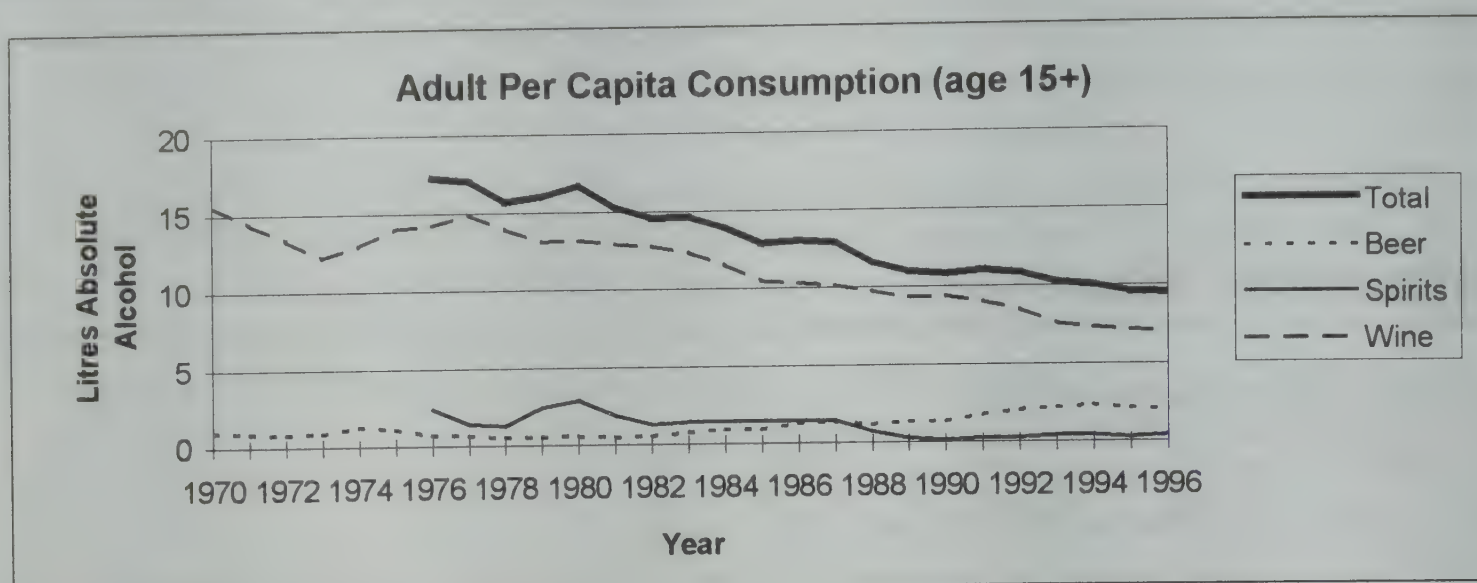
Adult literacy rate (per cent), 1995 : total 96; male 97; female 96

Alcohol production, trade and industry

With the country's per capita wine consumption decreasing, Argentina's wineries have been subject to mergers and acquisitions. Meanwhile, beer production rose fivefold during the 1980s. Quilmes

Industrial SA, Argentina's largest brewer, is based in Luxembourg and is 15 per cent owned by Heineken Brewery.

Alcohol consumption and prevalence



Consumption

Argentina's per capita alcohol consumption has declined steadily. There is a trend towards an increase in beer consumption.

Prevalence

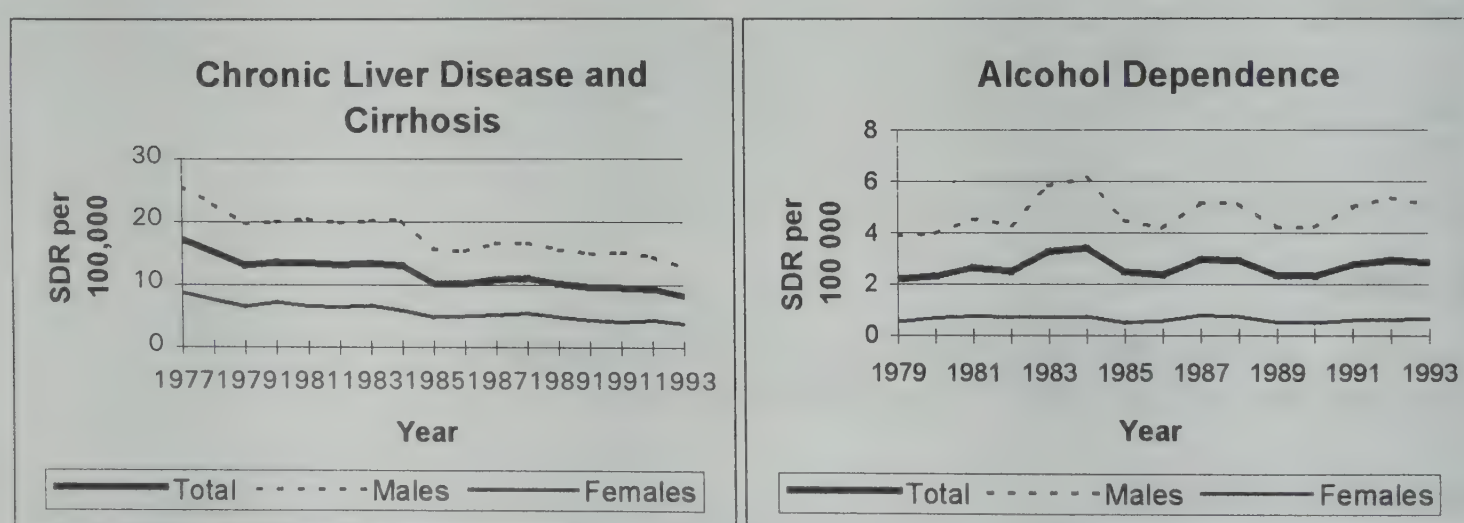
A 1996 epidemiological survey collected information on drinking from 1152 persons over 35 in households in three districts of Buenos Aires. One third of the respondents used no alcohol and one third used alcohol daily (mostly wine).

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Of a sample of 4800 young men called up for military service in 1992, 42 per cent were found to have been alcohol abusers (defined either as alcohol dependent or using alcohol "unsuitably") in the previous 30 days.

A study among work groups showed that 26 per cent suffered from alcohol abuse, drinking more than one litre of wine per day or using wine to relieve stress.



Mortality

In 1990 mortality among patients admitted for excessive alcohol consumption was 15.4 per cent compared with overall hospital mortality of 11.5 per cent.

Morbidity

Alcohol dependent people dominate alcohol and other drug-related admissions to hospital. A 1988 survey of all emergency consultations over one week in three hospitals in Buenos Aires showed that five per cent were related to substance abuse, of which 64 per cent were alcohol-related.

Health problems

A case-control study including 131 cases of oesophageal cancer and 262 hospital controls was carried out in the 10 main hospitals in the city of La Plata. Current drinkers were three times as likely to develop oesophageal cancer as non-drinkers. Drinkers who consumed at least 200 grams of ethanol per day were eight times as likely as non-drinkers to develop oesophageal cancer.

Alcohol policies***Control of alcohol products***

President Carlos Menem removed the 2.5 per cent excise tax on alcohol in 1996. There are no regulations on the advertising of alcoholic beverages.

Control of alcohol problems

The legal drinking age is 18 years. A National Preventive Education Plan was implemented in 1987-1989, and preventive publicity campaigns have been designed for radio and television.

Alcohol data collection, research and treatment

The Ministry of Health and Social Action is responsible for treatment services. There are no beds in general hospitals specifically for alcohol dependent patients and very few in psychiatric services. Admission is according to clinical requirements. Some treatment is carried out by non-professional organizations of a religious nature.

Bahamas (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	210 000	256 000	276 000
Adult (15+)	129 000	174 000	195 000
% Urban	75.1	83.6	86.5
% Rural	24.9	16.4	13.5

Health status

Life expectancy at birth, 1990-1995 : 68.7 (males), 77.9 (females)

Infant mortality rate in 1990-1995 : 23 per 1000 live births

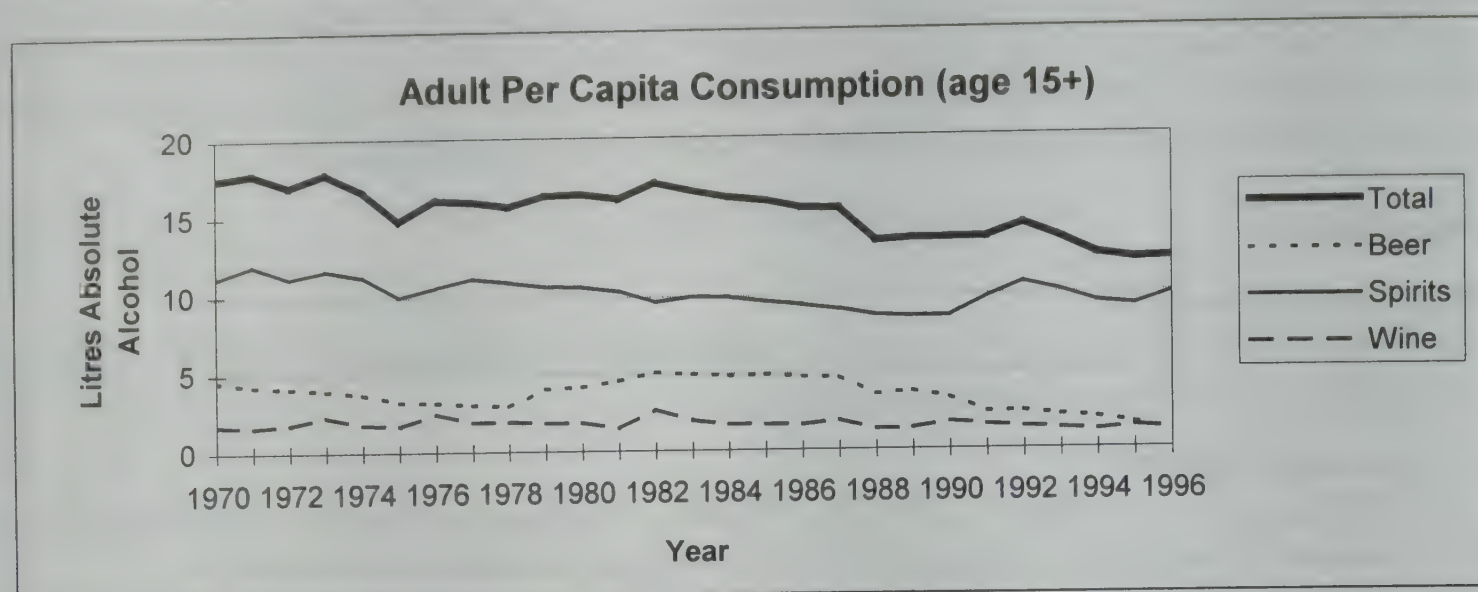
Socioeconomic situation

GNP per capita (US\$), 1995: 11 940, PPP estimates of GNP per capita (current int'l \$), 1995: 14 710.

Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 4%; services 91%

Adult literacy rate (per cent), 1995 : total 98; male 99; female 98

Alcohol consumption and prevalence



Consumption

The relatively high rate of alcohol consumption in the Bahamas may reflect tourist consumption and duty free sales more than indigenous consumption patterns.

Barbados

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	249 000	257 000	262 000
Adult (15+)	175 000	194 000	202 000
% Urban	40.2	44.8	47.4
% Rural	59.8	55.2	52.6

Health status

Life expectancy at birth, 1990-1995 : 72.9 (males), 77.9 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 6560, PPP estimates of GNP per capita (current int'l \$), 1995: 10 620.

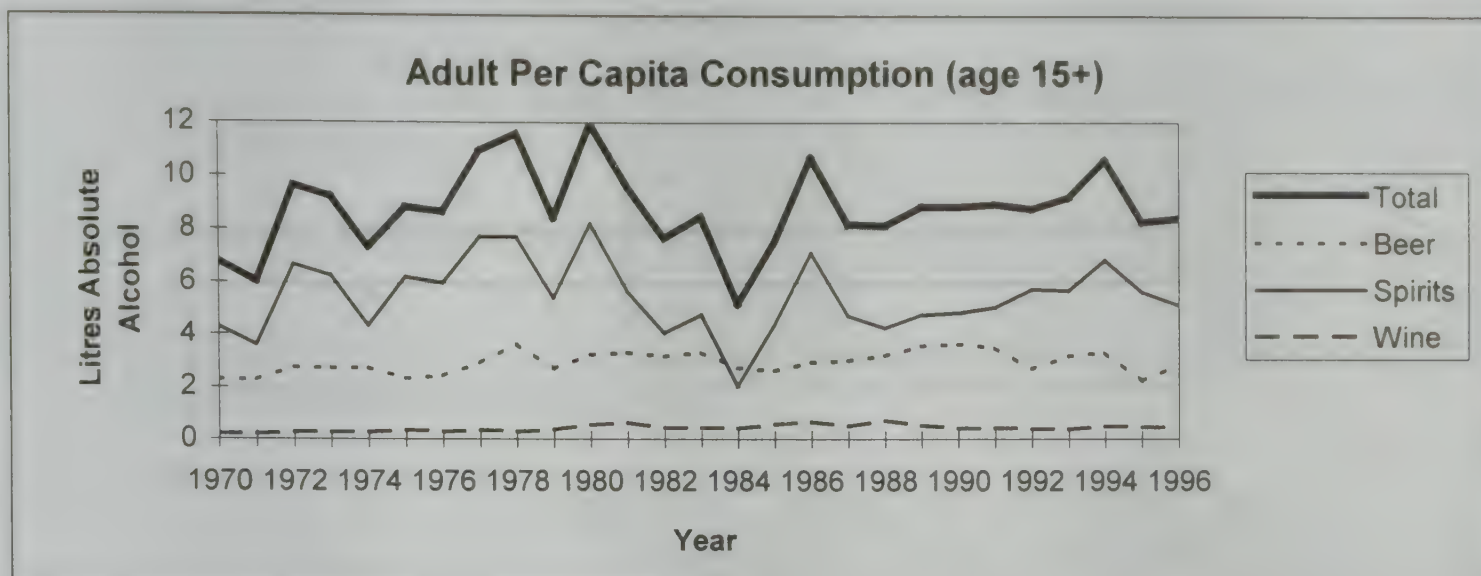
Average distribution of labour force by sector, 1990-1992 : agriculture 7%; industry 11%; services 82%

Adult literacy rate (per cent), 1995 : total 97; male 98; female 97

Alcohol production, trade and industry

Barbados produces and exports distilled spirits and beer.

Alcohol consumption and prevalence



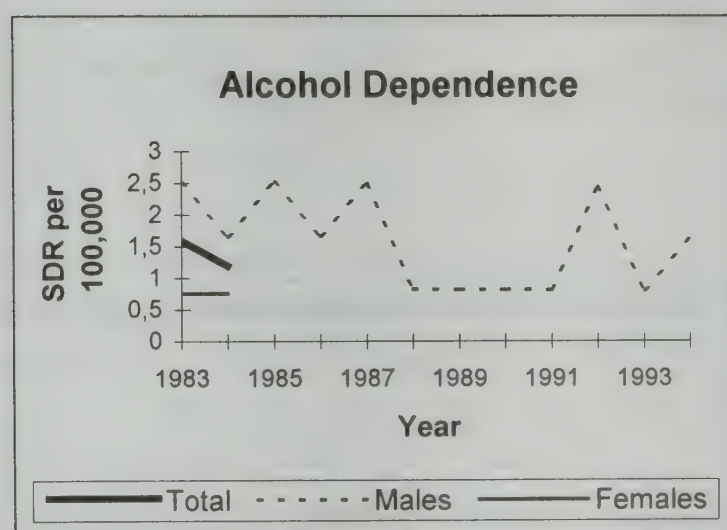
Consumption

Much of Barbados spirits production is exported. Because of the delay between spirits production and exports, a genuine sense of alcohol consumption in Barbados may only be gained by averaging several years together, to allow for years such as 1984 when high spirits exports combined with low spirits production and imports give the probably erroneous appearance of a substantial decline in consumption.

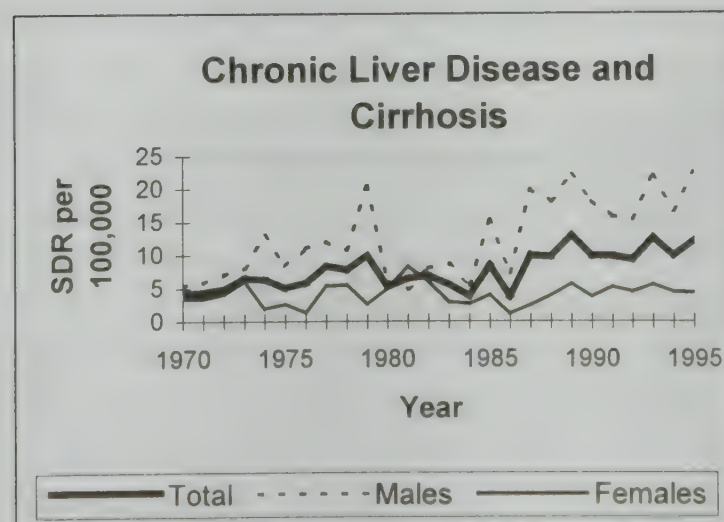
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1994, SDR from alcohol dependence syndrome per 100 000 population was 1.6 for males. Data for females are for the most part unavailable.



Mortality



Belize

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	146 000	189 000	215 000
Adult (15+)	77 000	108 000	123 000
% Urban	49.4	47.7	46.8
% Rural	50.6	52.3	53.2

Health status

Life expectancy at birth, 1990-1995 : 72.4 (males), 75.0 (females)

Infant mortality rate in 1990-1995 : 33 per 1000 live births

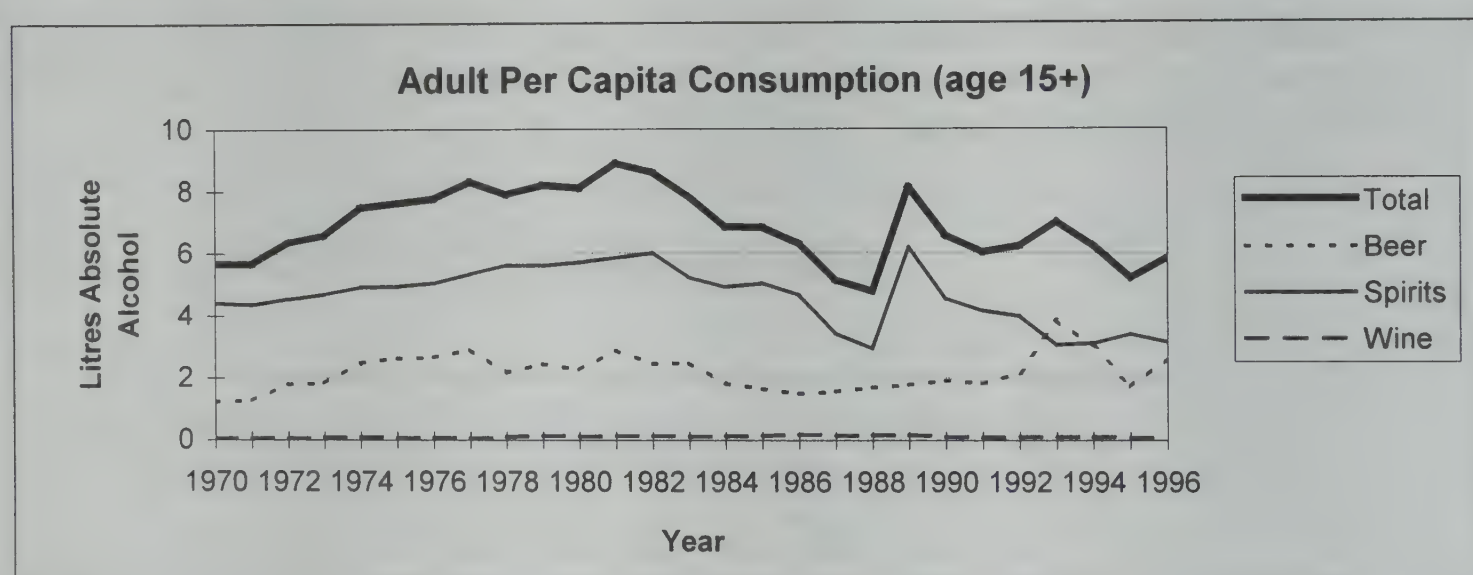
Socioeconomic situation

GNP per capita (US\$), 1995: 2630, PPP estimates of GNP per capita (current int'l \$), 1995: 5400.

Alcohol production, trade and industry

Belize produces beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice in Belize is spirits. A sharp increase in spirits imports in 1989 accounts for the sudden rise in consumption in the graph above. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Age patterns

Five hundred and twenty interviews were conducted among people aged 14 to 30 in households in Belize City in 1993, using random sampling. Nearly 61 per cent of all respondents had used alcohol at some time in their lives and 43.2 per cent reported usage within the last 30 days. More than 58 per cent of males reported current usage (in the past thirty days) of alcohol, compared with only 29.1 per cent of women. Of those drinking in the past month, 6.6 per cent used alcohol daily (7.5 per cent of males, 4.9 per cent of females). Of those between the ages of 14 and 19, 33.1 per cent (43.9 per cent of males and 22.7 per cent of females) had used alcohol in the past 30 days.

In 1992, a self-administered questionnaire collected data from 3473 students, including 4 sixth forms colleges, 30 high schools and 116 primary schools. Alcohol was the only drug which showed rising use compared with surveys conducted in 1986 and 1989. Fifty-seven per cent (62.7 per cent of males, 52.2 per cent of females) had used alcohol. A quarter of those 10 years-old or younger had used

alcohol, while 82.6 per cent of 17 year-olds had tried alcohol. Of those who used alcohol, 73 per cent had begun using it before age 15.

Only 0.6 per cent of the sample reported using alcohol every day, 2.3 per cent drank at least three times per week, and 10.9 per cent drank weekly. The majority of respondents in each grade used alcohol six times or less per year.

Mortality, morbidity, health and social problems from alcohol use

Health problems

Of those who reported ever using alcohol in the Belize city study, 6.7 per cent reported having experienced physical problems caused by alcohol.

Social problems

Of those who reported ever using alcohol in the Belize city study, six per cent reported having experienced social problems, including economic, employment, legal or family problems, nervousness or other problems as a result of their drinking.

Bolivia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 355 000	6 573 000	7 414 000
Adult (15+)	3 075 000	3 864 000	4 408 000
% Urban	45.5	55.8	60.8
% Rural	54.5	44.2	39.2

Health status

Life expectancy at birth, 1990-1995 : 57.7 (males), 61.0 (females)

Infant mortality rate in 1990-1995 : 75 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 800, PPP estimates of GNP per capita (current int'l \$), 1995: 2540.

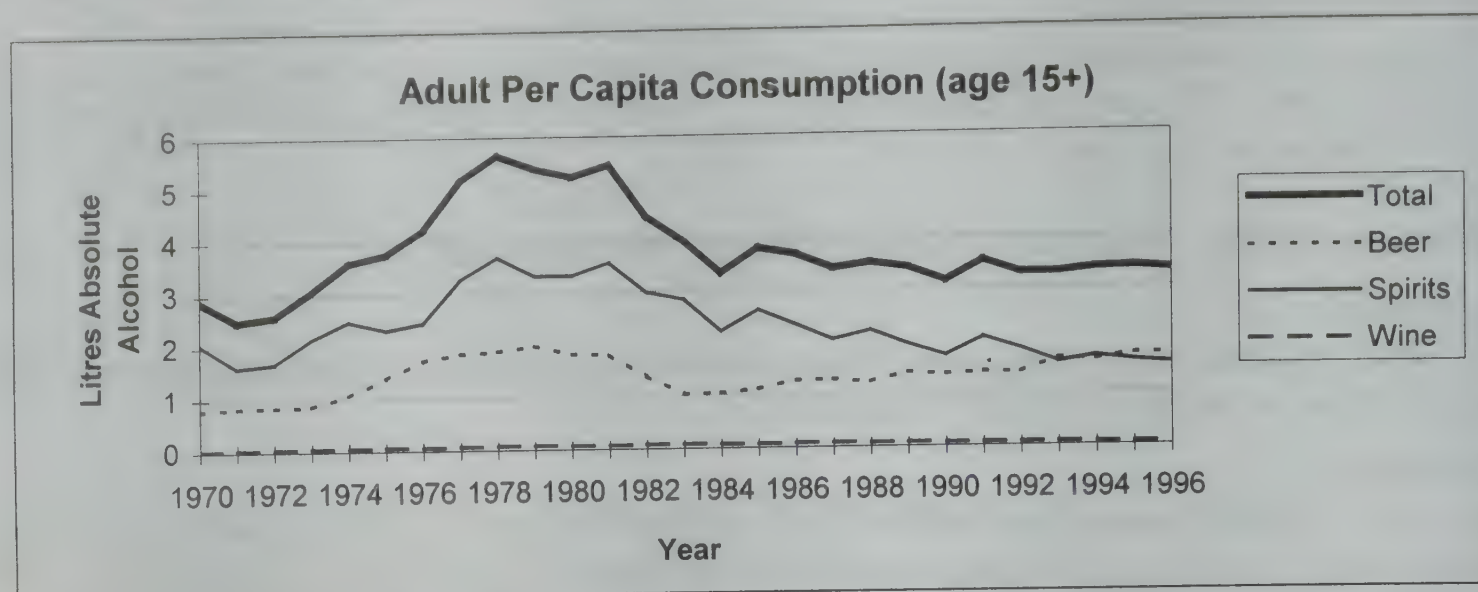
Average distribution of labour force by sector, 1990-1992 : agriculture 47%; industry 19%; services 34%

Adult literacy rate (per cent), 1995 : total 83; male 90; female 76

Alcohol production, trade and industry

Bolivia produces beer, spirits and wine. In 1996, the Argentine brewing giant Quilmes Industrial SA (based in Luxembourg and owned 15 per cent by Heineken) invested US\$ 48 million in brewing operations in Bolivia.

Alcohol consumption and prevalence



Consumption

As a result of a decline in apparent spirits consumption, figures for adult consumption of beer and of spirits have converged. The graph above does not take into account home production of *chicha* (a fermented maize drink), legal importation (which is limited) and smuggling (which is significant).

Prevalence

Lifetime prevalence of alcohol use in 1996 in cities with 30 000 or more inhabitants was 79.2 per cent. Prevalence of use in the past year was 66.9 per cent, and prevalence of use in the past month was 44.2 per cent. Male lifetime prevalence was 84.3 per cent compared to 75.6 per cent for females, and male prevalence rates for the previous year were 76.2 per cent, versus 60.4 per cent for females. Male and female prevalence of use in the previous month was 57.9 per cent and 34.6 per cent, respectively.

Sixty-eight per cent of respondents in a 1993 random sample of 6000 urban residents aged 12 to 50 years had used alcohol at some point in their lives (75 per cent of men and 61 per cent of women), and 41 per cent had used alcohol in the last 30 days (52 per cent of men and 32 per cent of women).

A growing acceptance of alcohol consumption has been observed. In the Andean rural area, the drinking of alcohol by women during civic and religious activities is now accepted. Men reportedly drink heavily, particularly with friends on weekends, and male intoxication is accepted.

Age patterns

In cities of more than 30 000 inhabitants, 17.7 per cent of those aged 12 to 17 years reported drinking alcohol in the past month, an increase from 16.7 per cent in 1992. Among 18 to 50 year-olds, prevalence of use in the past month ranged from 43.6 to 57.8 per cent. Thirty-five per cent of 12 to 17 year-olds reported use in the previous year, while previous year prevalence rates ranged from 71.1 per cent to 78.6 per cent among respondents 18 to 50 years old. Lifetime prevalence rates were highest among the 25 to 34 and 35 to 50 age groups (92.6 per cent and 94.2 per cent, respectively). The lifetime prevalence rate for the 12 to 17 age group was 38.6 per cent, while the 18 to 24 age group showed a lifetime prevalence of 84.7 per cent.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Data from the National Institute for Research on Drug Abuse show that alcohol dependence represented 38.8 per cent of the demand for treatment for addiction to various substances between 1976 and 1980, 27 per cent between 1981 and 1985, and a lower percentage in the following five years.

Morbidity

In 1985 researchers at the Psychiatric Clinic of the National Health Fund in the city of La Paz reviewed 953 hospitalizations and more than 4500 outpatient consultation records. Twenty-six per cent of hospitalizations (nearly 90 per cent males) and 7.5 per cent of outpatient visits were for alcohol problems.

Health problems

A 1990 study by the Department of Hygiene and Industrial Safety in three factories in La Paz found that 7.3 per cent of absenteeism in the first two days of the work week and 1.2 per cent of work-related injuries were directly related to the consumption of alcohol.

Alcohol policies

Control of alcohol products

The Ministry of Industry and Trade and the Ministry of Social Welfare and Public Health regulate the industry through licensing.

Control of alcohol problems

The Ministry of Social Welfare and Public Health and the Ministry of Education are involved in the coordination of prevention strategies and programmes aimed at the entire population, with special emphasis on the groups at greatest risk. Preventive education is carried out in the schools. Prevention campaigns are carried out by State and private institutions. The National Medical Residency System of the Graduate School of the University of Bolivia includes drug education in all the health science departments.

Alcohol data collection, research and treatment

The National Council for the Prevention of Drug Addiction (CONAPRE) plays a role in guiding and supervising research. There are state-run treatment centres for alcohol and other drug problems in state-run general hospitals, and treatment for multiple substance abuse is provided in state-run psychiatric treatment centres. The National Directorate for Prevention is the state agency which operates rehabilitation centres and coordinates rehabilitation with other organizations such as Alcoholics Anonymous.

Brazil

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	121 286 000	148 477 000	161 790 000
Adult (15+)	75 537 000	97 391 000	109 538 000
% Urban	66.2	74.6	78.3
% Rural	33.8	25.4	21.8

Health status

Life expectancy at birth, 1990-1995 : 64.0 (males), 68.7 (females)
Infant mortality rate in 1990-1995 : 58 per 1000 live births

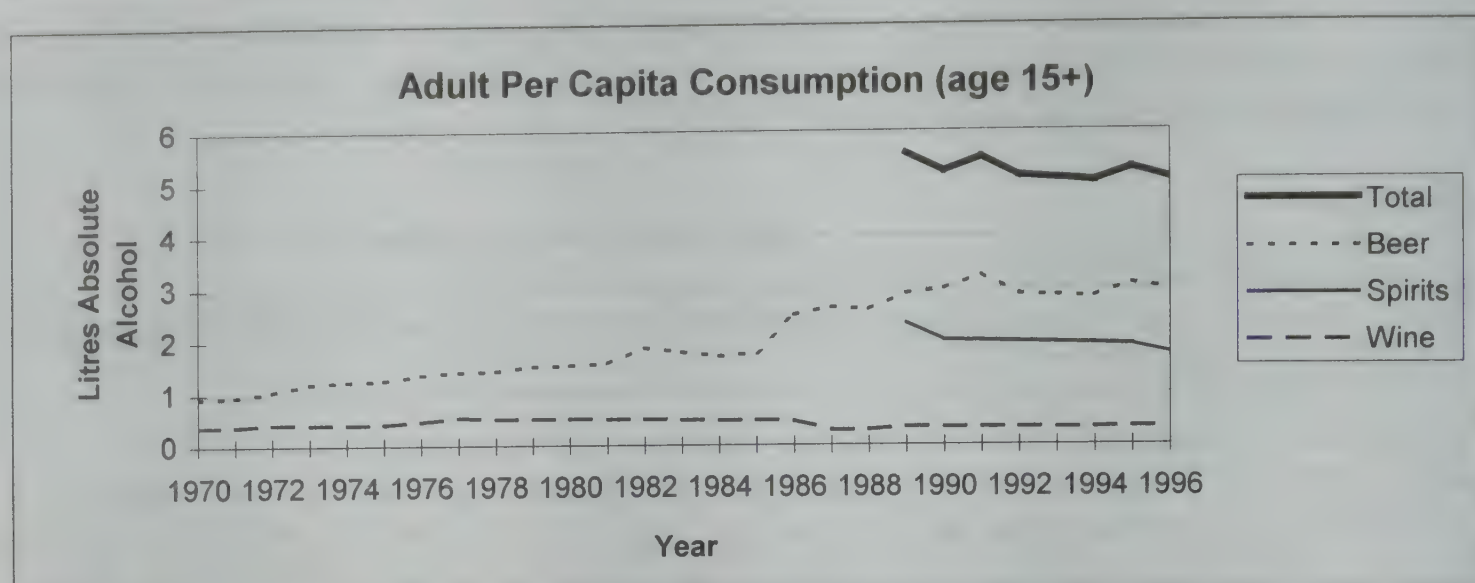
Socioeconomic situation

GNP per capita (US\$), 1995: 3640, PPP estimates of GNP per capita (current int'l \$), 1995: 5400.
Average distribution of labour force by sector, 1990-1992 : agriculture 25%; industry 25%; services 47%
Adult literacy rate (per cent), 1995 : total 83; male 83; female 83

Alcohol production, trade and industry

Brazil is home to the world's fifth largest brewer, Brahma, and its competitor Antartica SA, 12th in the global rankings. Both brewers have been targets for joint ventures with United States brewers Anheuser-Busch and Miller. However, in 1997 the Brazilian government ruled the joint ventures in violation of Brazil's local control laws, and ordered them terminated.

Alcohol consumption and prevalence



Consumption

Beer has outpaced spirits as Brazil's alcoholic beverage of choice. Adult per capita consumption of pure alcohol in 1996 was approximately five litres. The Ministry of Agriculture estimates that one billion litres of the local sugar cane distillate *pinga* are produced every year. This would increase the estimate of adult per capita consumption of pure alcohol in 1996 to approximately 8.6 litres.

Prevalence

A study, published in 1996, using a representative sample of Porto Alegre residents aged 15 years and older found that 24 per cent of the sample were abstainers, 15.5 per cent were heavy drinkers, defined as daily intake of 30g or more of pure alcohol on a single occasion (29.3 per cent of males, 4 per cent of females), and 12.3 per cent reported drinking daily. Women consumed alcoholic beverages in lower frequency and amounts than men, and non-Whites had rates of heavy drinking and dependence that were twice as high as those of Whites. Heavy drinking behaviour and alcohol dependence increased with age, both being more prevalent among those aged 40 years or older. Beer was the most commonly consumed alcoholic beverage (89 per cent), followed by spirits (63 per cent) and wine (61 per cent).

Age Patterns

Drinking alcohol among young people is common, and increasing among females. Several studies have found mean age of onset to be 10.1 years. Studies of secondary students in public schools in ten Brazilian state capitals during 1987, 1989 and 1993 showed a significant increase in alcohol use in seven out of ten cities between 1987 and 1993. In 1987, 76 per cent of students had used alcohol, 58 per cent in the past year and 31 per cent in the last month, and 5 per cent on 20 or more days during the past month. By 1993, life-time use among males had increased in only three cities, while among females use had increased in eight cities. Younger students (12 to 15 years old) more consistently increased their alcohol use than their older counterparts. Prevalence of use in the past 30 days increased in nine cities, while frequent use (six or more times in the last 30 days) increased in six cities.

A household survey published in 1995 of 950 adolescents aged 10 to 18 in the urban area of Porto Alegre found alcohol use prevalent in 70 per cent of the sample. Males drank more heavily and frequently than females, and drinking increased with age. The mean age for experimentation with alcohol was 10.1, with no gender differences. This is in marked contrast to a 1996 study of those aged 15 years and over, for whom modal age of onset was 15 for males and 20 for females. About 26 per cent of those who had ever tried alcohol became intoxicated, and beer was the most common beverage used for intoxication (51 per cent of those who ever got intoxicated), followed by spirits (32 per cent). The most frequent place of initiation into alcohol use was "family setting", and when the 40 per cent of the sample that reported drinking in the last 30 days were asked about drinking situations, 70.1 per cent reported that they usually drink with their family. Heavy drinking by adolescents was positively associated with their perception that their parents were drinking too much.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1992 study of the metropolitan areas of São Paulo, Brasília and Porto Alegre used a cross-sectional design to draw a probabilistic sample of residents in each site aged 15 years and over. Overall psychiatric morbidity ranged between 30 and 50 per cent. Alcohol dependence ranked second only to anxiety and phobic states in men. Four per cent, five per cent and nine per cent of males presented with alcohol dependence in São Paulo, Brasília and Porto Alegre respectively. Studies in other cities have found similar rates for alcohol dependence: 3.2 per cent in Rio de Janeiro, 8 per cent in São Paulo, and 9.3 per cent in Porto Alegre (using two positive responses to the CAGE survey as the criterion for dependence).

Mortality

In 1995 there were 1112 alcohol-attributable deaths in São Paulo, 1.7 per cent of the total deaths in the city. Of these, 46.7 per cent were due to alcoholic liver cirrhosis or hepatitis, while 52.8 per cent were attributed to alcohol dependence. According to official data from the Federal Health Department, alcohol dependence and alcohol psychosis represented the great majority of mental health mortality: 78.5 per cent and 4.5 per cent, respectively.

Out of 8665 total violent deaths in São Paulo city in 1994, 1522 were accompanied by a toxicological examination and a death certificate. Analysis of these showed substantial proportions of every category of violent death were related to alcohol. Of 530 homicides, 51.7 per cent showed positive blood alcohol concentration. Of 165 suicides, 36.4 per cent had a positive BAC. Of 47 falls, 35.9 per cent had a positive BAC. Of 42 drowning deaths, 54.8 per cent tested positive for alcohol. Of 146 deaths classified as "other accidents," 43.2 per cent were alcohol-related. Of 250 deaths categorized as "all other external causes," 36.4 per cent had a positive BAC. In the 124 pedestrian deaths from motor vehicle crashes, 52.4 per cent had been drinking, while 51.8 per cent of the 218 non-pedestrian motor vehicle crash fatalities had a positive BAC.

Morbidity

In 1988 alcohol dependence was found to be the main etiological factor in 71 per cent of 200 diagnosed cases of liver cirrhosis in São Paulo. An interview study of 103 alcohol dependent patients and 63 controls at a hospital in Brazil in 1990 suggested that suicide was more common among alcohol dependent patients than controls: 17 of the alcohol dependent patients had attempted suicide as compared to only three attempts among controls.

Analysis of 797 consecutive cases of chronic pancreatitis from 1963 to 1987 in São Paulo and Belo Horizonte determined alcohol dependence to be the main etiological agent in 89.6 per cent of all cases. In 1988 and 1989, studies of 65 304 and 67 592 inpatients, respectively, at a sample of Brazilian hospitals found that alcohol-related admissions represented 95 per cent of all substance-related admissions. Men accounted for 95 per cent of all alcohol-related admissions, and 80 per cent of the men admitted with alcohol problems were 30 years or older.

Social problems

Of 1136 traffic crash notifications between 1976 and 1985, 25 per cent included information on driver alcohol use, based either on self-report or on breathalyser tests. Of the cases where driver alcohol use data were present, approximately 18 per cent of drivers reported alcohol use before driving or presented BAC in excess of 0.08 g%. An earlier examination of the relationship between alcohol consumption and traffic crashes between 1966 and 1975 revealed that 25 per cent of the drivers involved had alcohol in their blood, and 18 per cent exceeded 0.08 g%.

In 1980, 1170 files from the Social Services Section of São Paulo Police Department were classified as "family conflicts" cases. Comments on excessive alcohol use were found in 343 out of 1170 files (29 per cent).

Alcohol policies

Control of alcohol products

There is no public health-based legislation on the production, import and export of alcoholic beverages. In 1996, the advertising of alcoholic beverages (except beer) was prohibited in the media

between 06:00 and 21:00 hours. However, only beverages containing more than 13 per cent of pure alcohol are considered alcoholic beverages in this legislation.

The state of São Paulo forbids the sale of alcohol on state roads. However, alcohol sales are permitted on all federal roads crossing the state, and on all roads in other states.

Control of alcohol problems

The minimum legal age for drinking is 18 years. Consumption of alcohol during working hours is prohibited. The BAC limit for driving is 0.08 g%. The Federal University of São Paulo offers a specialist training course in alcohol and drug misuse directed at health care professionals. A few professional associations offer courses for physicians. No national agency exists to address alcohol policy.

Alcohol data collection, research and treatment

The Brazil Centre for Drug Abuse Education (CEBRID) has conducted periodic surveys of alcohol and other drug use among secondary schools students in ten state capitals.

A national programme has been set up to establish a country-wide policy on the treatment and rehabilitation of alcohol dependent persons.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Brazil.

Canada

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	24 594 000	27 791 000	29 463 000
Adult (15+)	19 011 000	22 030 000	23 325 000
% Urban	75.7	76.6	76.7
% Rural	24.3	23.4	23.3

Health status

Life expectancy at birth, 1990-1995 : 74.2 (males), 80.7 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

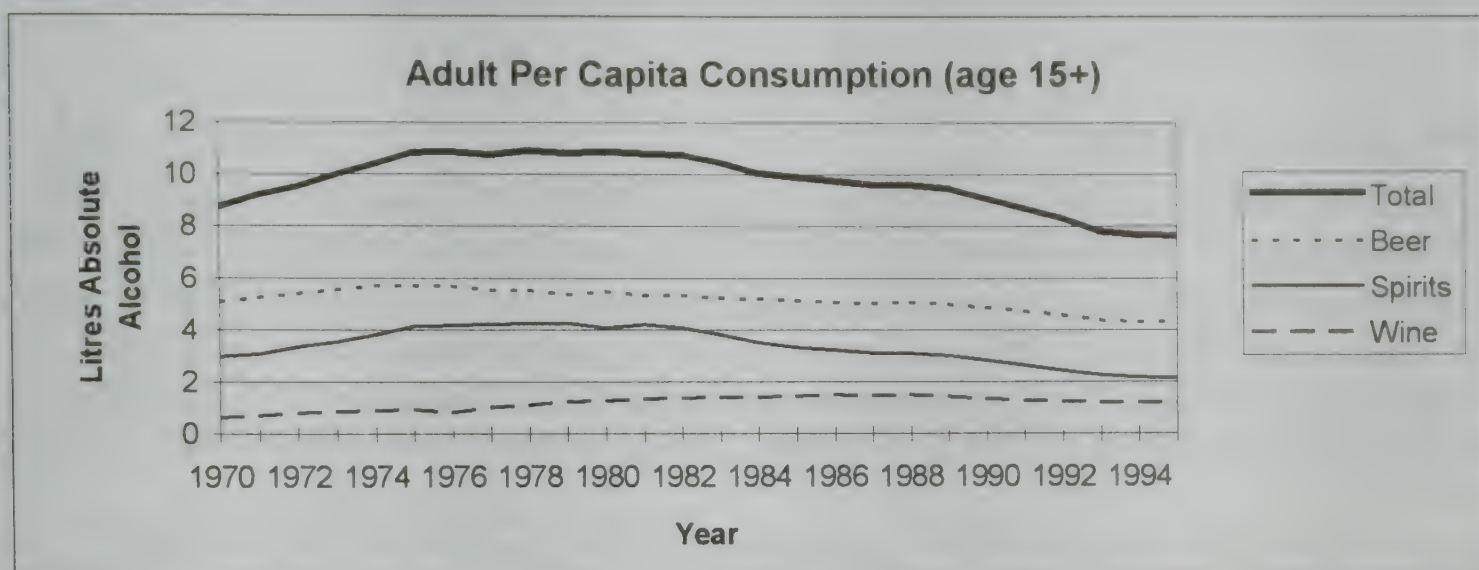
GNP per capita (US\$), 1995: , 19 380 PPP estimates of GNP per capita (current int'l \$), 1995: .

Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 23%; services 72%

Alcohol production, trade and industry

Canada is a major producer of beer and spirits. The beer market is dominated by two giants, Molson Breweries (half-owned by Foster's of Australia) and Labatt, owned by Interbrew of Belgium. These two are within one percentage point of each other's market share, and together sell 95 per cent of Canada's beer. The other Canadian alcohol giant is Seagram, the world's third largest producer of distilled spirits.

Alcohol consumption and prevalence



Consumption

Growth in consumption of all alcoholic beverages combined was moderate during the 1950s and into the early 1960s; increases averaged about one per cent per year. From 1963 through 1975, the rate of growth averaged about four per cent per year and then slowed to less than one per cent per year until 1980. Since 1980, per capita consumption of alcohol has declined on average per year by 2.3 per cent. From 1950 to 1975, spirits consumption increased steadily. Sales stabilized after 1975, and since 1980, consumption has decreased at an average annual rate of 4.2 per cent. Wine consumption has had the highest rate of growth over the period since 1950, but remains at a low level. Beer has increased the least of the three beverages since 1950. Consumption remained virtually unchanged during most of the 1970s and since 1980 has been trending downward, but by a lower rate (1.4 per cent) than spirits.

The illegal trade in alcoholic beverages and the growth in non-regulated production began to emerge as a significant source of consumption in the early 1990s. A 1996 report of the Auditor General indicates that the evasion of excise duty on spirits due to "home production" resulted in a loss of revenues as high as CA\$ 200 million (US\$ 133 million) in 1994-1995.

Prevalence

According to various national surveys, the proportion of Canadians who drank alcohol continued to decline throughout the 1990s. About 80 per cent of the population drank in 1979, 81 per cent in 1985, 78 per cent in 1989, 79 per cent in 1991, 74 per cent in 1993, and 72 per cent in 1994.

Of the 9189 respondents in the 1994 Canadian Alcohol and Drug Survey, 72.3 per cent were current drinkers (i.e. they drank alcohol within the past year), 13.5 per cent were former drinkers (drank alcohol in previous years but not in the past year), and 12.8 per cent had never drank alcohol. Men were more likely than women to be current drinkers (78.1 per cent versus 66.7 per cent), and the proportion who said they drank ranged from 84 per cent among 20 to 24 year olds to 46 per cent among individuals over 75 years of age. More people in Alberta (76.4 per cent) and British Columbia (75.6 per cent) said they drink than in other parts of the country (i.e. 67.2 per cent in Prince Edward Island). A higher proportion of drinkers have higher incomes, post-secondary education and are employed than non-drinkers.

The 1989 National Alcohol and Drug Survey indicated that most drinking is done in private settings, such as a quiet evening at home (18 per cent), a party or other social gathering (16 per cent), having friends visit (16 per cent), or visiting others (15 per cent).

Age patterns

In 1995, 58.8 per cent of students in Ontario had used alcohol in the past 12 months. This represents an increase from the 56.5 per cent recorded in 1993, and a decrease from the 66.2 per cent recorded in 1989. Males had slightly higher rates of alcohol use than females (60.0 per cent and 57.6 per cent in 1995, respectively). The largest percentage of alcohol use was in the 18 years and over age category (78.2 per cent compared with 75.0 per cent in the 16 to 17 age group, 56.9 per cent in the 14 to 15 age group, and 31 per cent in the 13 years and under age group).

Alcohol use among population subgroups

A 1989 national sample of "street youths" indicated that about 88 per cent drank alcohol, while nine per cent reported drinking daily.

Economic impact of alcohol

In 1992/1993 the sale of alcoholic beverages totalled CA\$ 10.43 billion (US\$ 8.14 billion). The average Canadian age 15 or older spent CA\$ 462 (US\$ 360) on alcoholic beverages in 1992/1993.

It is estimated that in 1992 alcohol abuse accounted for about CA\$ 7.5 billion (US\$ 5.85 billion) in costs, or about CA\$ 265 (US\$ 207) per capita. The largest economic costs of alcohol are lost productivity due to morbidity and premature mortality (CA\$ 4.14 billion or US\$ 3.23 billion), law enforcement (CA\$ 1.36 billion or US\$ 1.06 billion), and direct health care costs (CA\$ 1.30 billion or US\$ 1.01 billion).

Alcohol provided employment for 15 741 Canadians and more than CA\$ 4.2 billion (US\$ 3.3 billion) in government revenue in 1992/1993.

Mortality, morbidity, health and social problems from alcohol use

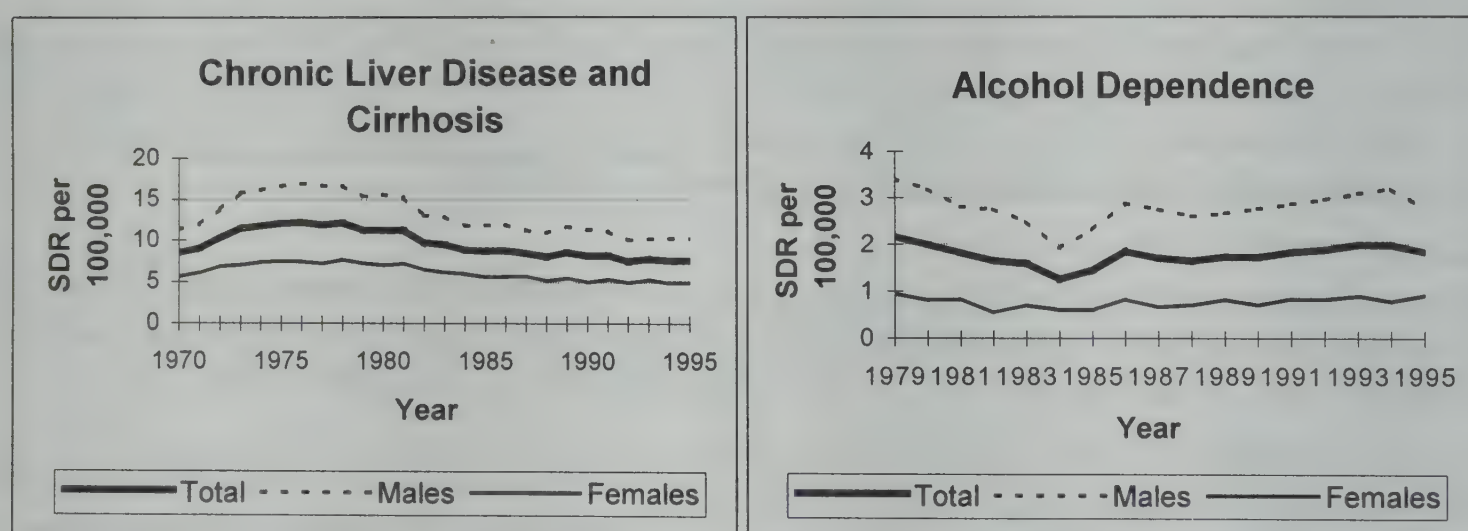
Alcohol dependence and related disorders

The SDR in 1995 from alcohol dependence was 1.8 per 100 000 population. Rates for men were approximately three times those for women.

Mortality

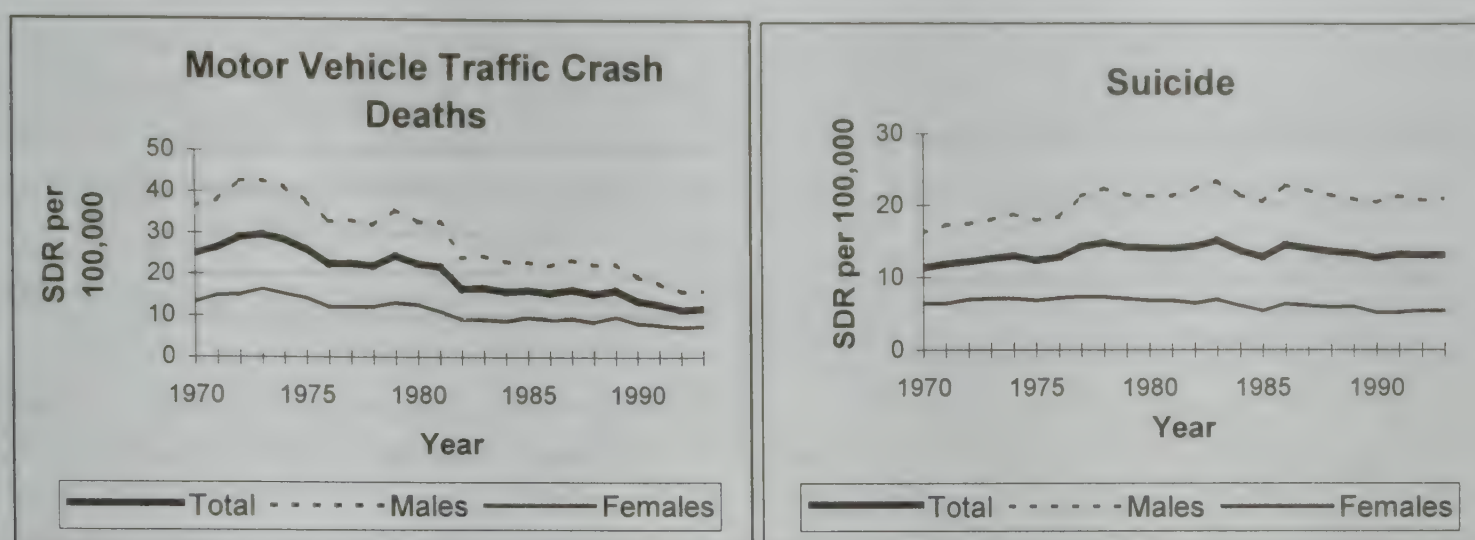
An estimated 6701 Canadians lost their lives as a result of alcohol consumption in 1992. This represents three per cent of total mortality in Canada for 1992.

Approximately 80 per cent of total liver cirrhosis mortality is attributable to alcohol use.



The largest number of alcohol-related deaths stems from impaired motor vehicle driving crashes. In 1993, 46 per cent of drivers fatally injured in motor vehicle crashes had some alcohol in their blood, 39 per cent were over the legal limit of 0.08 g% BAC, and 30 per cent were over 0.15 g% BAC. It is estimated that 1021 men and 456 women died in motor vehicle crashes in 1992 as the result of drinking. Motor vehicle deaths represent 22 per cent of all alcohol-related deaths and 33 per cent of productive life years lost.

Since 1991 the proportion of fatally injured drivers with BAC levels over the legal limit has increased, following a decade of decline. The proportion of drivers who are impaired is high among drivers between the ages of 20 and 25 (46.2 per cent) and 26 and 35 (47.6 per cent). Regionally, Prince Edward Island (60 per cent) and Newfoundland (56.3 per cent) have the highest proportion of fatally injured drivers who are alcohol-impaired and Alberta (26.8 per cent) has the lowest proportion.



In 1992 there were 918 alcohol-related suicides.

Morbidity

There were an estimated 86 076 hospital separations (56 474 for men and 29 602 for women) due to alcohol in 1992. The number of alcohol-related hospital days is estimated at 1 149 106 (755 204 for men and 393 902 for women). The 86 076 hospitalizations due to alcohol constitute two per cent of all hospitalizations, and the 1.15 million days of hospitalization due to alcohol represent three per cent of the total days spent in hospital for any cause.

Social problems

Respondents in the 1993 General Social Survey were asked if their drinking affected their social life, physical health, happiness, home life or marriage, work, or finances. Nearly one-tenth (9.2 per cent) of drinkers suffered at least one problem as a result of their drinking. The most common problems related to physical health (5.1 per cent) and financial position (4.7 per cent). In 1993 there were 92 539 people charged with alcohol-related traffic offences, or 413 per 100 000 population age 16 or older. Men accounted for 90 per cent of these charges in each year from 1990 to 1993.

Alcohol policies

Control of alcohol products

For three decades the price of alcohol increased substantially, but generally at rates similar to other consumer goods. Since 1986, however, the price of alcohol has increased at a slightly faster pace than the prices for other consumer goods. In 1992/1993 the cost of 10 litres of absolute alcohol, as a percentage of personal disposable income, increased to 2.89 per cent from 2.78 per cent in 1991/1992, and 2.68 per cent in 1990/1991.

The federal government has authority over alcohol imports and exports, as well as alcohol-related excise taxes. There is a proliferation of taxes, particularly at the provincial level, and no official statistics exist on total tax burdens. The following are estimates of the total tax levy per litre of absolute alcohol on alcoholic beverages (in Canadian dollars): beer - 36.30 (US\$ 26.50); spirits - 53.83 (US\$ 39.30); table wine - 32.24 (US\$ 23.53); fortified wine - 21.50 (US\$ 15.70). At the federal level, an excise duty is levied on beer and spirits, and an excise tax on wine. As of 1991, beer from 1.2 to 2.5 per cent alcohol by volume is taxed CAN\$ 0.13990 (US\$0.10) per litre, spirits are taxed CAN\$ 11.066 (US\$ 8.08) per litre of absolute alcohol, and wine from 1.2 to 7 per cent alcohol by volume is taxed CAN\$ 0.2459 (US\$.18) per litre. On 1 January, 1991, a federal value added tax replaced a 19 per cent manufacturers sales tax on alcoholic beverages. The prevailing rate of the new federal tax is seven per cent.

In most provinces, the liquor monopolies regulate or monitor the prices at which most alcoholic beverages may be sold for off-premise consumption. In the case of beer, however, the states of Alberta, British Columbia and Saskatchewan have eliminated or reduced pricing restrictions for beer sold out of the monopoly stores and from vendor outlets. In Quebec, domestic beer is sold through grocery stores only, and the government has no involvement in beer pricing.

Hours of sale for the purchase of alcoholic beverages are regulated by the liquor monopolies in each province and territory.

Federal regulations prohibit a range of advertising messages, including any that attempt to influence non-drinkers to drink; appeal to minors; associate consumption with high-risk activities; suggest consumption is associated with social acceptance, personal success, or athletic or business achievement; or violate the relevant provincial advertising law.

Control of alcohol problems

The minimum legal drinking age is 19 in all Canadian provinces and territories, except in Quebec, Manitoba and Alberta, where the minimum age is 18.

In recent years, a number of provinces have initiated education programmes aimed at reducing impaired driving and/or encouraging the responsible consumption of alcohol. Canada's Drug Strategy, launched by the federal government in 1987, was a collaborative effort of the federal, provincial and territorial governments and many non-governmental organizations. The objective of the Strategy was to reduce harm caused by alcohol and other drug use. A separate national programme on impaired driving was launched at the same time as the Drug Strategy. This programme, targeted at young people, included broadcast messages and supporting materials, using the theme "Play It Smart"; a server training programme for on-premise establishments; and teaching aids. Both the impaired driving programme and Canada's Drug Strategy were due to expire on 31 March, 1992. The Drug Strategy (and the impaired driving programme within the Strategy's context) was subsequently renewed and given a new sunset date of 31 March, 1997. After that date, health programming developed under the Drug Strategy was to be merged with other health and social programmes relating to population health.

There are four specific drinking and driving offences in the federal Criminal Code: operating or having care or control of a motor vehicle while one's ability to drive is impaired by alcohol or a drug; impaired driving causing death or bodily harm; operating or having care or control of a motor vehicle when one's BAC is over 0.08 g%; and failing to provide a breath or blood sample for analysis. These four offences are punishable by imprisonment, heavy fines and lengthy driving prohibitions. Since 1987 the Canadian brewing industry has spent more than CAN\$ 95 million on "responsible use" programmes. Efforts have included paid television messages, radio advertisements, outdoor billboards, posters and brochures as well as the funding of third parties in targeted programmes. In 1996, the brewing industry launched "Stand Up, Speak Out, Be Heard", a media programme aimed at young people.

Alcohol data collection, research and treatment

The Canadian Centre on Substance Abuse was created by an Act of Parliament in August 1988 to provide a national focus for drug and alcohol issues in Canada. The Centre's three broad goals were to promote increased awareness of issues related to alcohol and drug abuse, promote increased participation in the reduction of harm associated with alcohol and drug abuse, and promote the use and effectiveness of relevant programmes. The Canadian Centre on Substance Abuse established a National Clearinghouse on Substance Abuse to collect and disseminate information, compile and maintain a variety of databases, and coordinate the Canadian Substance Abuse Information Network. The Centre has published a variety of directories, statistical profiles, pamphlets, research and policy papers and special reports.

In most provinces, alcohol and drug addiction agencies are funded by the government. Typically, these organizations operate treatment and rehabilitation facilities and are involved in preventive education, information and sometimes data collection and research. In Ontario, the Addiction Research Foundation sponsors a wide variety of local, national and international studies of alcohol and other drug use.

Chile

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	11 143 000	13 154 000	14 262 000
Adult (15+)	7 403 000	9 195 000	10 051 000
% Urban	81.2	83.3	83.9
% Rural	18.8	16.7	16.1

Health status

Life expectancy at birth, 1990-1995 : 70.4 (males), 77.4 (females)

Infant mortality rate in 1990-1995 : 16 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 4160, PPP estimates of GNP per capita (current int'l \$), 1995: 9520.

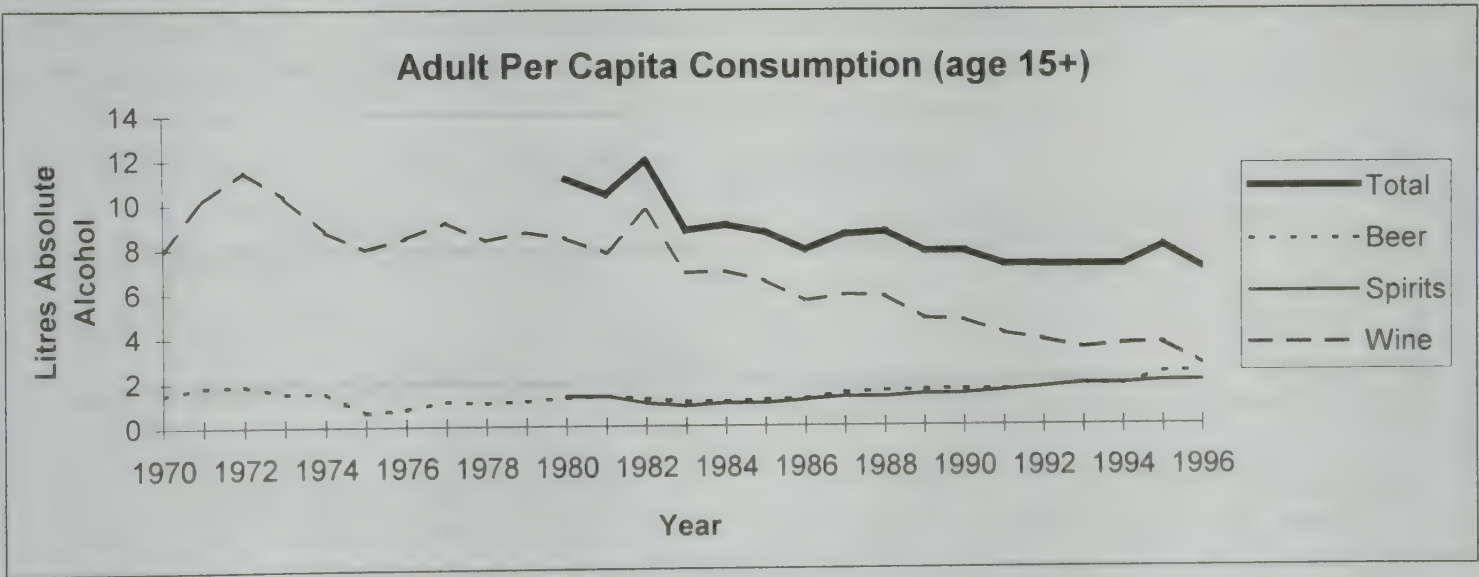
Average distribution of labour force by sector, 1990-1992 : agriculture 19%; industry 26%; services 55%

Adult literacy rate (per cent), 1995 : total 95; male 95; female 95

Alcohol production, trade and industry

Chile produces substantial amounts of beer and wine, and also reports domestic spirits production. As wine production has declined overall, wine exports have increased both as a percentage of wine produced and in gross numbers. Chile's wine industry is comprised of approximately 30 wineries, the largest four of which control more than 80 per cent of the country's export business. Chile is currently the world's seventh largest exporter of wine, and the largest in South America. The Ministry of Agriculture expects Chile's global ranking to rise to number four (trailing only Italy, France and Spain) by the year 2000.

Alcohol consumption and prevalence



Consumption

As wine consumption has declined, consumption of beer and spirits has risen to meet it. Clandestine production of alcoholic beverages is estimated at about 20 per cent of the recorded annual consumption level, suggesting that total consumption is closer to 8.5 litres of absolute alcohol per adult.

Prevalence

Results of a survey of 29 066 inhabitants of 13 regions in Chile were published in 1997. The universe represented was 869 038 inhabitants. Lifetime prevalence of alcohol consumption was 72.4 per cent

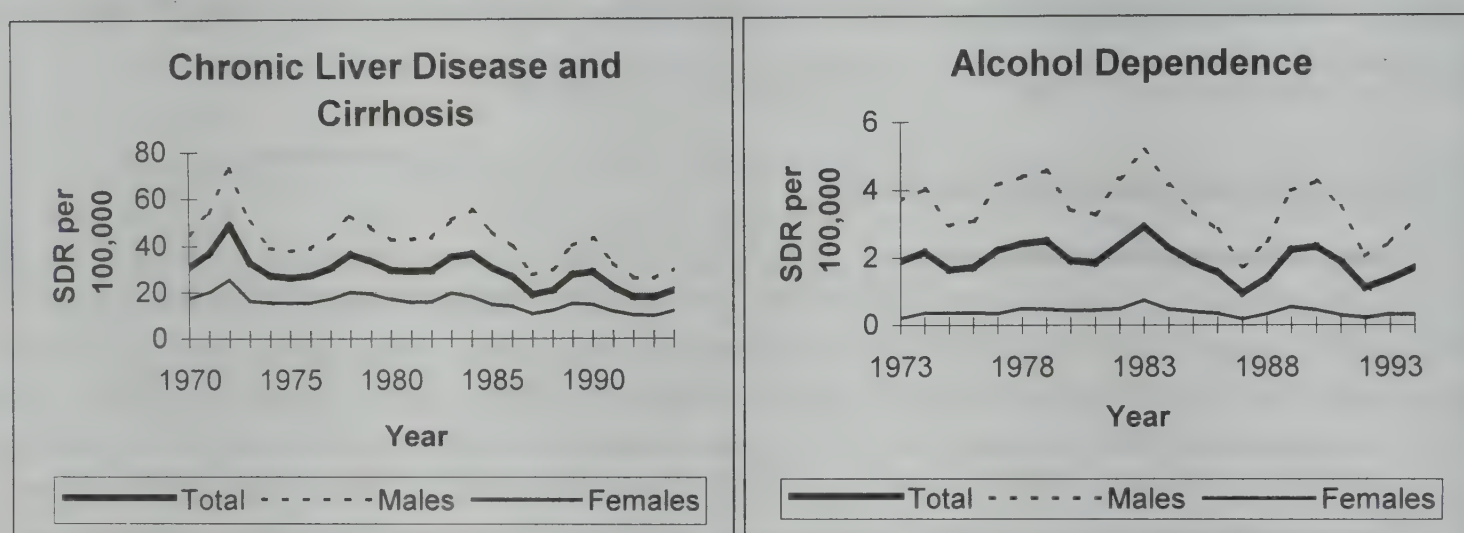
(74.5 per cent for males and 70.4 per cent for females). The average age of initiation of alcohol use was 13.3 years.

A study published in 1996 drew on a national sample of 10 544 urban inhabitants between the ages of 12 and 64, representing a population of 6 186 528. The percentage of the sample who had consumed alcohol during the past month was 39.9 (50.2 for males and 31 for females). Use in the past month was highest among those in the 19 to 25 age group (49.7 per cent). In general, use in the past month increased with socioeconomic status. Approximately 60 per cent of the sample consumed alcohol in the past year (68.6 per cent of males and 53.5 per cent of females), and 12.6 per cent of the sample were ex-drinkers (11.1 per cent of males and 13.9 per cent of females).

Age patterns

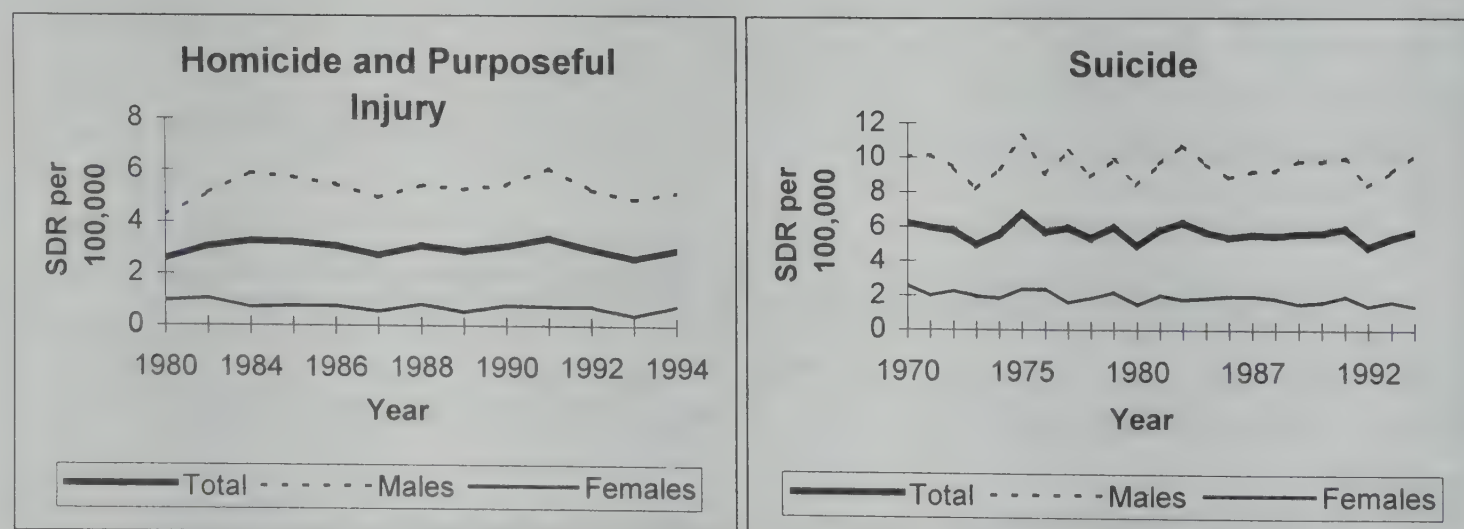
Regular consumption of alcohol among young people rose from 11.5 per cent in 1984 to 18 per cent in 1990. Approximately 70 per cent of all children who complete secondary school education consume alcohol, more than 15 per cent have been inebriated before the age of 15, and five per cent drink more than once a week. These percentages are higher among young people who have dropped out of school, among the unemployed and among the children of alcohol dependent parents.

Mortality, morbidity, health and social problems from alcohol use



Mortality

Between 1981 and 1983, 38.6 per cent of suicides were alcohol-related. Of all homicides recorded between 1981 and 1983, the proportion of persons with alcohol in their blood was 48.6 per cent, and in 1984, it was reported that in 52 per cent of the cases of homicide, the victim was an excessive alcohol drinker.



Social problems

The number of drivers arrested for drunk driving declined from 5400 in 1983 to an average of 2900 in 1986 and 1987.

Alcohol policies

Control of alcohol products

There are regulations limiting where and when alcoholic beverages may be sold, but the marketing of alcohol is unrestricted.

Control of alcohol problems

The minimum legal drinking age is 21 years. All university health and science programmes include courses on alcohol dependence in their undergraduate curricula. The Ministry of Health offers training on recognition and treatment of alcohol problems for general practitioners.

Alcohol data collection, research and treatment

The Centre for Alcoholism Studies and the Ibero-American Association for the Study of Alcohol Problems have developed plans for treatment and academic programmes. Religious organizations, with some professional assistance, have set up centres for the treatment and guidance of alcohol and other drug dependent persons.

Colombia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	26 525 000	32 300 000	35 101 000
Adult (15+)	15 908 000	20 900 000	23 542 000
% Urban	63.9	70.0	72.7
% Rural	36.1	30.0	27.3

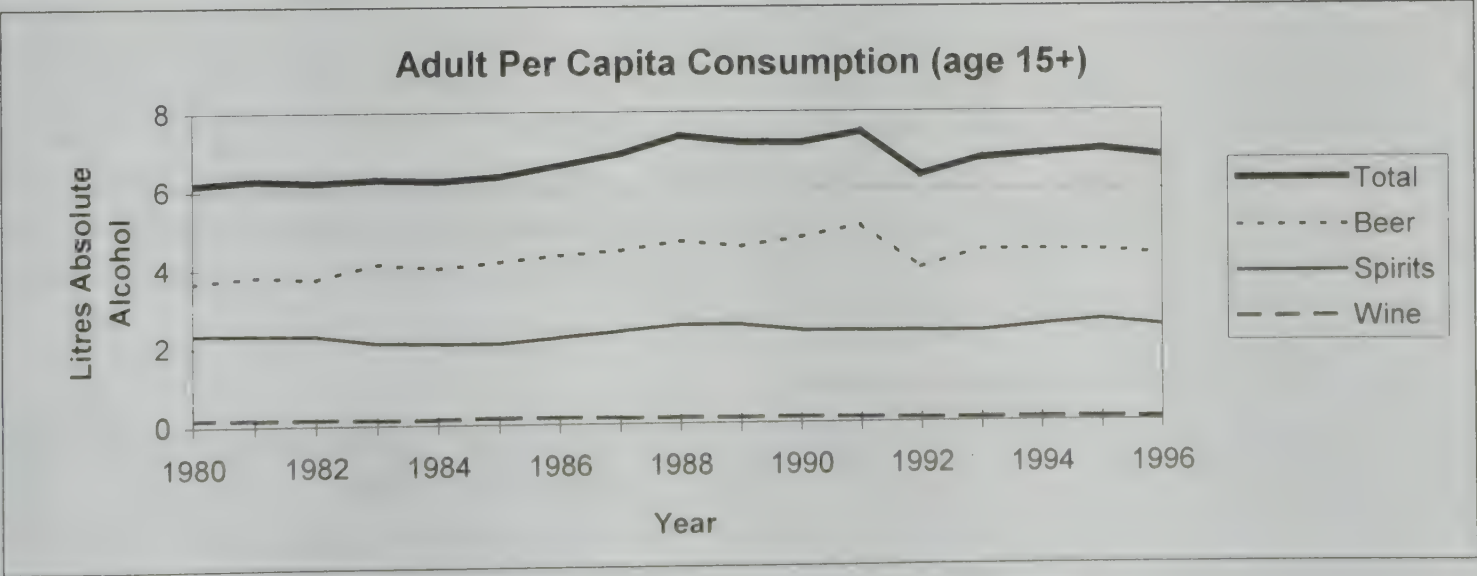
Health status

Life expectancy at birth, 1990-1995 : 66.4 (males), 72.3 (females)
Infant mortality rate in 1990-1995 : 37 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1910, PPP estimates of GNP per capita (current int'l \$), 1995: 6130.
Average distribution of labour force by sector, 1990-1992 : agriculture 10%; industry 24%; services 66%
Adult literacy rate (per cent), 1995 : total 91; male 91; female 91

Alcohol consumption and prevalence



Consumption

No clandestine production of alcohol has been reported. Beer is the alcoholic beverage of choice. Overall consumption has risen slightly since 1980.

Prevalence

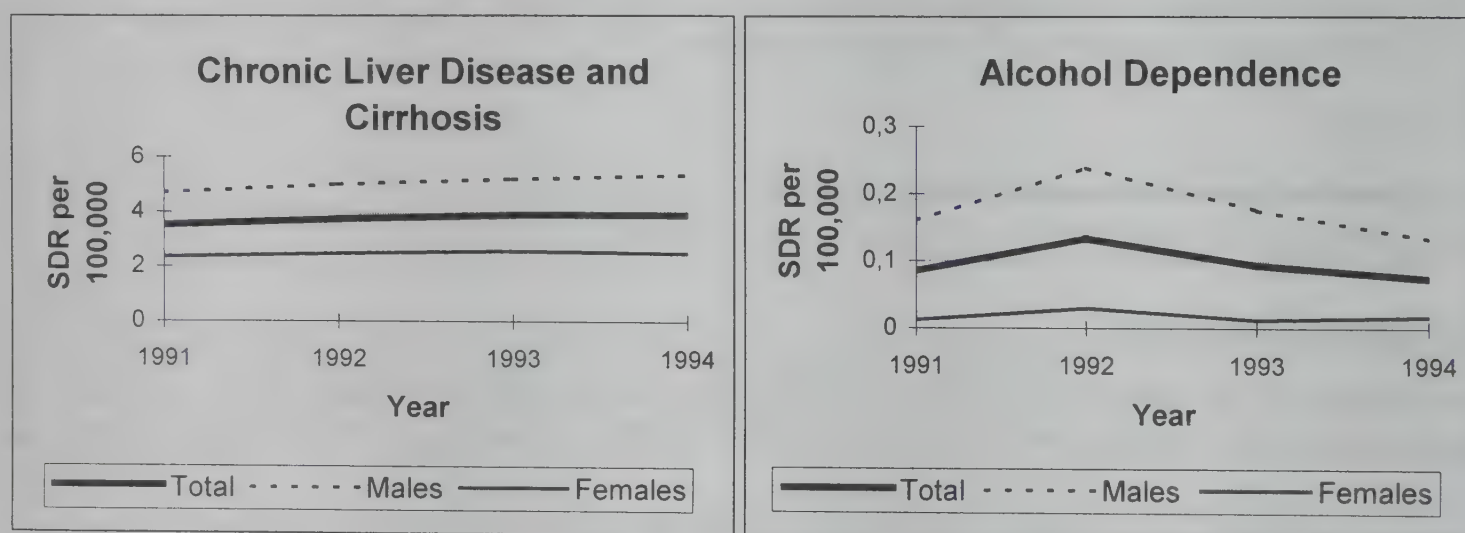
In 1996, a probabilistic, multi-stage stratified sample was taken of 18 770 individuals between the ages of 12 and 60 living in non-institutional households in all the departments of Colombia. The rate of use of any alcoholic beverage during the last year was 59.8 per cent, and the rate of use during the last month was 35 per cent. The highest levels of use during the last month were found among males aged 18 to 44 years who were working and had college-level education. The mean age of start of use for alcoholic beverages was 15.9 years, slightly higher among males than females.

A 1987 survey of a random sample of 2800 urban residents aged 12 to 64 years found that 67 per cent had used alcohol at some time in their lives (81 per cent of men and 51 per cent of women). An interview study that same year of a representative sample of the urban population ($n = 2\,800$) aged 15 to 64 years, not including institutional populations, reported that alcohol was the drug most consumed by both sexes (70.5 per cent of males, and 41.6 per cent of females), the prevalence being highest in groups aged 16 to 37 years.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1987 interview study used the CAGE questionnaire to evaluate respondents for alcohol dependence. Judging from responses regarding events in the previous month, criteria for the diagnosis of alcohol dependence were met by eight per cent of the sample, the highest rates being five per cent for females aged 25 to 29 years and 20 per cent among males aged 38 to 49.



Alcohol policies

Control of alcohol problems

The minimum legal drinking age is 18, but it is not strictly enforced. The Colombian Corporation against Alcoholism and Drug Abuse (SURGIR) is involved in alcohol policy decisions. Law 30, passed in 1986, established a National Plan for the Prevention and Treatment of Drug Abuse and the Rehabilitation of Drug Abusers. The Ministry of Health is responsible for carrying out the National Plan. The Family Welfare Institute provides prevention training for educators, and the Ministry of Education offers seminars to professors on primary prevention of alcohol dependence. Efforts are being made to educate parents and community leaders.

Alcohol data collection, research and treatment

The University of Antioquia, through the National School of Public Health, has been the principal institution conducting research on the epidemiology of alcohol dependence.

The Mental Hospital of Antioquia conducts courses in which multidisciplinary teams are trained to provide treatment. There are 14 State drug abuse and alcohol dependence services, which operate in hospitals, and there are eight associated private institutions and many other independent ones that provide prevention, treatment and rehabilitation services. Treatment services are also provided by the

social security system. Four AA groups in the capital city of Bogota provide advisory services, prevention, intervention and treatment through self-help groups.

Costa Rica

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 284 000	3 035 000	3 424 000
Adult (15+)	1 397 000	1 928 000	2 227 000
% Urban	43.1	47.1	49.7
% Rural	56.9	52.9	50.3

Health status

Life expectancy at birth, 1990-1995 : 74.0 (males), 78.7 (females)
Infant mortality rate in 1990-1995 : 14 per 1000 live births

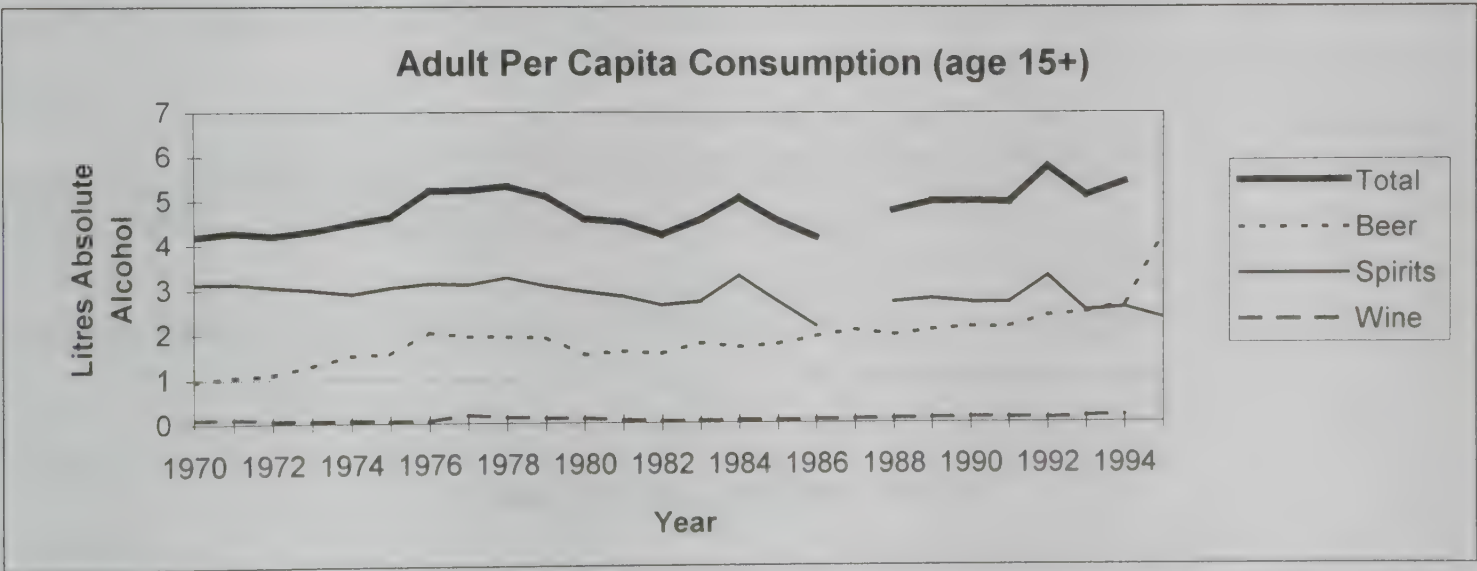
Socioeconomic situation

GNP per capita (US\$), 1995: 2610, PPP estimates of GNP per capita (current int'l \$), 1995: 5850.
Average distribution of labour force by sector, 1990-1992 : agriculture 25%; industry 27%; services 48%
Adult literacy rate (per cent), 1995 : total 95; male 95; female 95

Alcohol production, trade and industry

The brewing companies, Cerveceria Costa Rica and Cerveceria Americana, both produce beer, the latter holding approximately eight per cent of the market. Anheuser-Busch, the world's largest brewer, has signed a distribution agreement with Cerveceria Costa Rica, while Miller Brewing has set up a joint venture with Cerveceria Americana to brew the Miller brand for Latin America. Spirits and wine are imported.

Alcohol consumption and prevalence



Consumption

Consumption of wine is very low. Beer recently displaced spirits as the alcoholic beverage of choice, and is responsible for the increase in adult per capita consumption, according to figures provided by the Costa Rican government.

Prevalence

In a 1995 study of seven provinces in Costa Rica, lifetime prevalence of alcohol use was 62.3 per cent. Prevalence of use in the last year was 40.3 per cent, and prevalence of use in the last month was 24.9

per cent. Approximately 24.6 per cent were moderate drinkers, 9.7 per cent were excessive drinkers and 6.9 per cent were deemed alcohol dependent. About 58.7 per cent abstained from alcohol.

Another 1995 survey found that 56 per cent of the sample abstained from alcohol, 22 per cent were moderate drinkers, 10 per cent were excessive drinkers and five per cent were alcohol dependent. In a 1987 drug prevalence survey carried out on a sample of 2083 persons by the Institute on Alcoholism and Drug Dependence, 3.5 per cent had used illegal drugs and of these, 81 per cent had also used alcohol. Of the non-consumers of illegal drugs, 34.2 per cent had used alcohol.

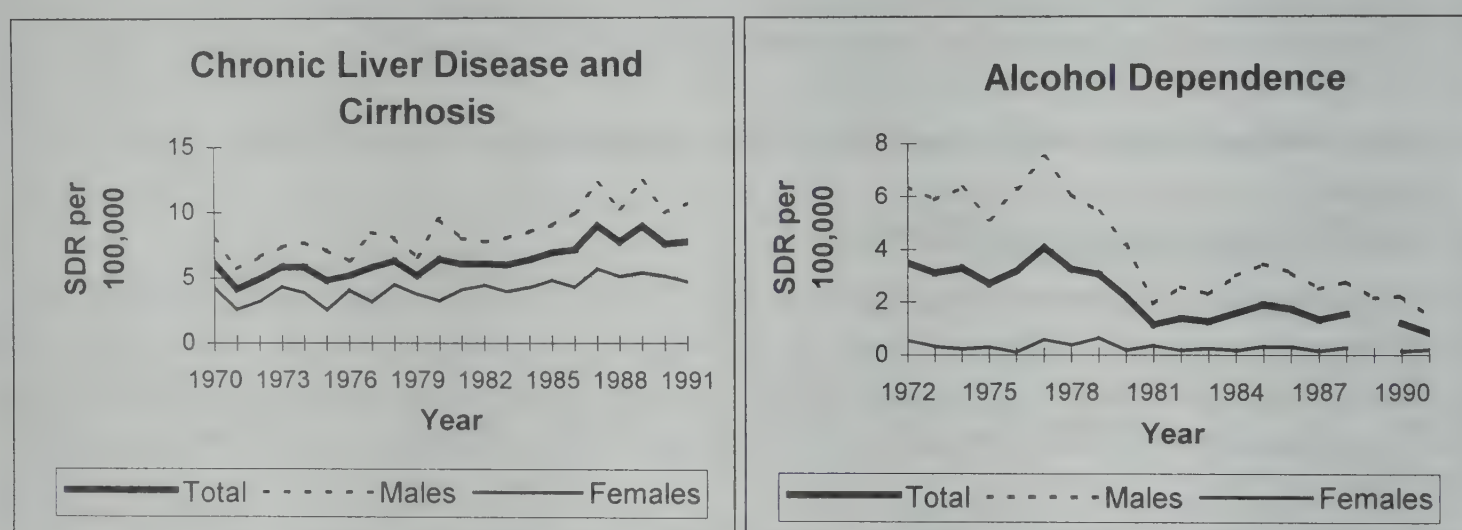
Alcohol use among population subgroups

In 1990, interviews with a sample of 469 residents of San Jose's shantytowns aged 15 years and over revealed that nine per cent were heavy drinkers.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1990 survey of residents of San Jose's shantytowns aged 15 or over found that five per cent showed signs of physical dependence on alcohol. The Costa Rican Social Security Fund (CCSS), the institution responsible for hospital and outpatient services throughout the country, does not maintain a specific register for alcohol dependence, but recorded 2166 discharges following a diagnosis of "alcoholism" in 1986 (0.7 percent of all discharges). Of these, 1250 were diagnosed with alcohol dependence syndrome, 302 with alcoholic psychosis, and 247 with alcoholic cirrhosis of the liver.



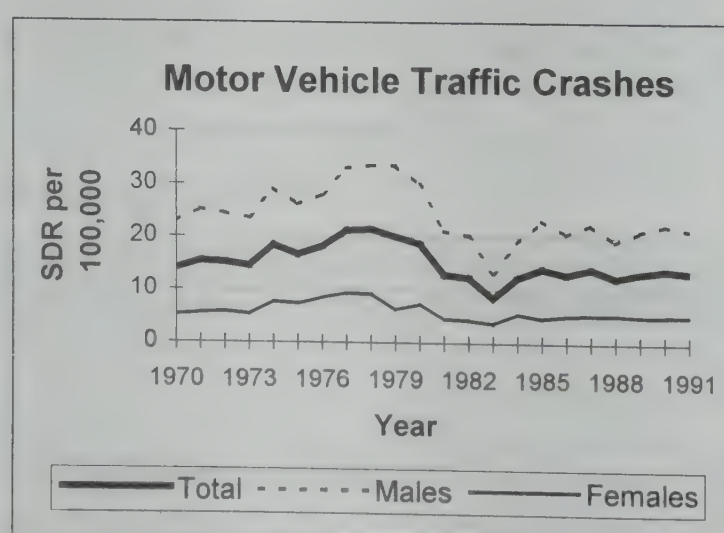
Mortality

A total of 116 deaths were directly attributable to alcohol use in 1992. The majority of these were caused by alcoholic hepatitis (50) and alcoholic cirrhosis (32).

Health problems

In 1993, a total of 8313 patients received medical treatment for alcohol problems. The Alcoholic Rehabilitation Centre and outpatients service reported a total of 1737 discharges during 1987. The average number of days of hospitalization was 12.8.

Of a total of 927 644 emergency consultations in 1987, 13 per cent were for problems related to alcohol.



Social problems

Of 30 116 motor vehicle traffic crashes in 1992, five per cent (1475) were caused by the inebriation of the driver. There were 119 435 traffic crashes during 1981-1987, of which five per cent were associated with drunk driving. It is estimated that 30 per cent of absenteeism and injuries at work are alcohol-related.

Alcohol policies

Control of alcohol problems

The Institute on Drug Dependence and Alcoholism's health promoters provide community education. The number of advertising messages promoting consumption of beer, rum, vodka and whisky through television, radio and the press was 71 271 in 1993. An attempt to counteract such promotion was made through preventive messages in the same media in 1993.

Alcohol data collection, research and treatment

The Institute on Drug Dependence and Alcoholism (IAFA) has been granted the power and responsibility of standardizing, regulating and coordinating activities related to the country's alcohol and drug problems. IAFA produces compilations of annual statistics on production, importation and per capita consumption of alcoholic beverages, deaths related to alcohol consumption, numbers of traffic crashes caused by drunken driving, and publicity and prevention indicators. They also maintain records of persons treated for alcohol problems, by treatment centre.

IAFA offers intensive training courses in the Schools of Medicine, Psychology, Social Work, Nursing and Education on alcohol and alcohol dependence, and in coordination with the Ministry of Education provides advisors for educators. IAFA is also responsible for guiding and supervising research studies.

Treatment is carried out mainly by IAFA and the Costa Rican Social Security Fund, which have specialized clinics and hospitals for that purpose. In addition, many communities have organized care systems, some supervised by IAFA and others receiving only advisory services and authorization. The Salvation Army has treatment centres in various parts of the country and Alcoholics Anonymous groups exist in almost all cities. According to the 1994 WHO Atlas survey, the facilities available are: four outpatient facilities (20 treatment slots), five inpatient facilities (50 beds), two residential facilities (210 beds), three detoxification centres (35 beds), 22 general hospitals (10 beds), 1350 Alcoholics Anonymous facilities, 13 self-help facilities (142 beds), five public care facilities (50 treatment slots), two spiritual counselling facilities, and two private practitioners (35 treatment slots).

Cuba

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 710 000	10 598 000	11 041 000
Adult (15+)	6 608 000	8 177 000	8 519 000
% Urban	68.1	73.6	76.0
% Rural	31.9	26.4	24.0

Health status

Life expectancy at birth, 1990-1995 : 73.5 (males), 77.3 (females)

Infant mortality rate in 1990-1995 : 12 per 1000 live births

Socioeconomic situation

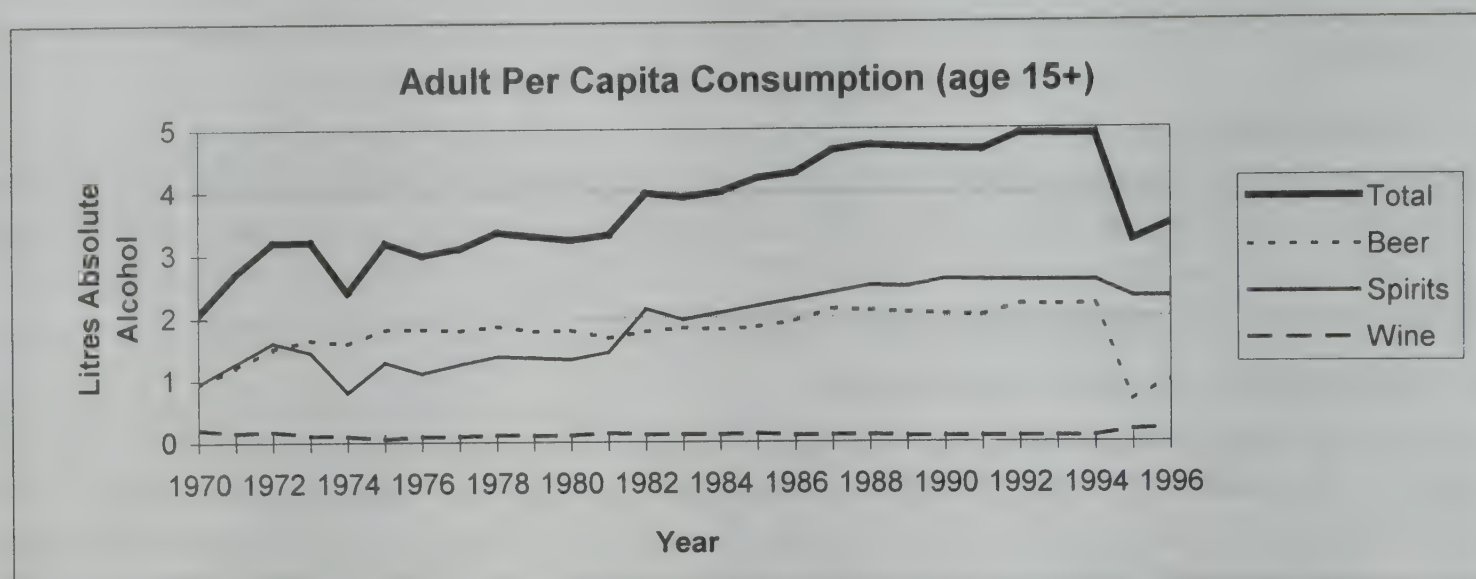
Average distribution of labour force by sector, 1990-1992 : agriculture 24%; industry 29%; services 47%

Adult literacy rate (per cent), 1995 : total 95; male 96; female 94

Alcohol production, trade and industry

Cuba produces beer, rum and other distilled spirits products.

Alcohol consumption and prevalence



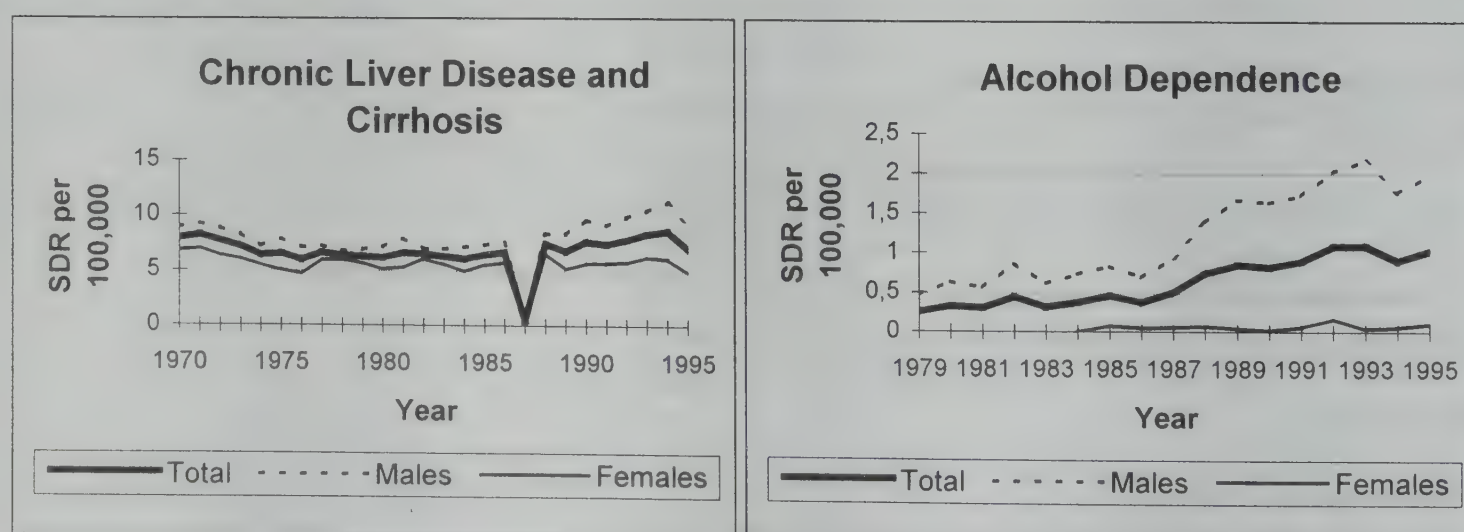
Consumption

Distilled spirits are the alcoholic beverage of choice in Cuba. By the mid-1990s, Cuba's beer consumption was declining reportedly because of difficulty obtaining sufficient malt from its former suppliers in Eastern Europe and the former Soviet Union.

Prevalence

A pilot study for a general population survey in 1993 and 1994 surveyed health behaviours of persons aged 35 years and over who had seen a randomly selected sample of family doctors in three health areas: Hnos. Cruz in Pinar del Rio Province, Santos Suarez in Havana City Province, and Tamayo in Havana City Province. Of the 4820 people screened, 43.7 per cent were males and the mean age for males was 52.9 (52.8 for females). More than 70 per cent of the sample population were White, the same percentage as that of the total population of these areas. The mean number of days men drank spirits in a week was 2.2, with a standard deviation of 2.3. Women averaged 0.5 days drinking spirits, with a standard deviation of 1.5. The mean number of bottles of beer per week for men was 2.7, with a standard deviation of 10.7, and the mean number of bottles for women was 0.4, with a standard deviation of 4.7.

Mortality, morbidity, health and social problems from alcohol use



Morbidity

During 1992 a total of 472 cases of optic neuropathy were reported in Cuba by local physicians, predominantly among adult men who used alcohol and tobacco.

Dominican Republic (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 697 000	7 110 000	7 823 000
Adult (15+)	3 291 000	4 477 000	5 078 000
% Urban	50.5	60.4	64.6
% Rural	49.5	39.6	35.4

Health status

Life expectancy at birth, 1990-1995 : 67.6 (males). 71.1 (females)
 Infant mortality rate in 1990-1995 : 42 per 1000 live births

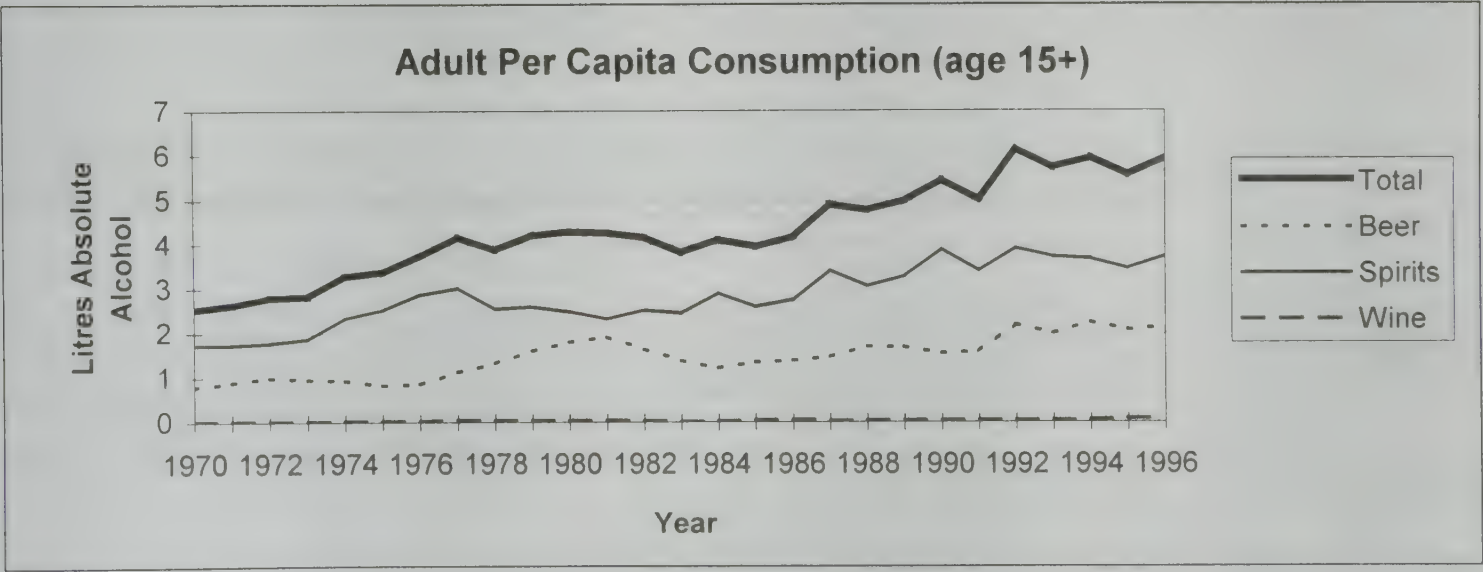
Socioeconomic situation

GNP per capita (US\$), 1995: 1460, PPP estimates of GNP per capita (current int'l \$), 1995: 3870.
 Average distribution of labour force by sector, 1990-1992 : agriculture 46%; industry 15%; services 39%
 Adult literacy rate (per cent), 1995 : total 82; male 82; female 82

Alcohol production, trade and industry

The Dominican Republic produces beer, wine and spirits. The brewing company Cerveceria Nacional Dominicana, of which the tobacco giant Phillip Morris has an equity share, produces Presidente, the country's leading beer brand with 95 per cent of the country's beer. Labatt, a subsidiary of Interbrew, created a beer called Soberana in 1997 to be brewed by Cerveceria Vegana to challenge Presidente's market dominance.

Alcohol consumption and prevalence



Consumption

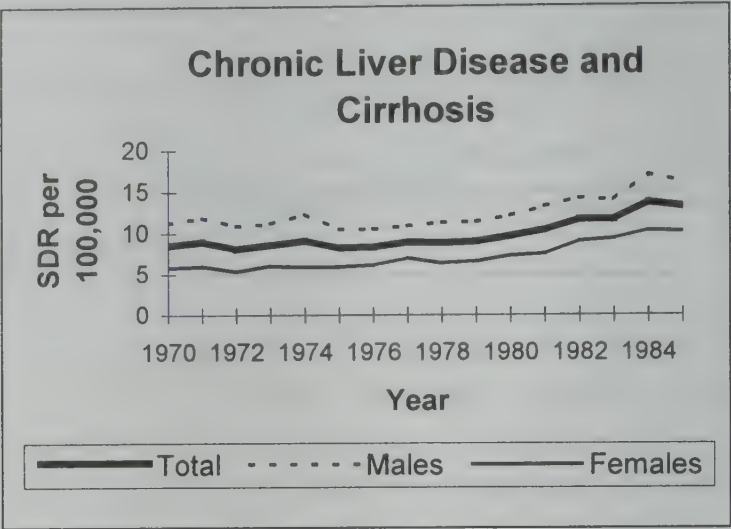
Spirits and beer dominate alcohol consumption in the Dominican Republic. Consumption of wine, solely from imports, is very low.

Prevalence

A survey on alcohol and other drug prevalence and attitudes was carried out in the Dominican Republic in 1992, using a probability sample of the urban population between the ages of 12 and 45 (3015 interviews). Overall, 65 per cent of the population had used alcohol during their lifetime (72 per cent of men and 59 per cent of women). Of the males, 64.8 per cent had used alcohol at least once in the last year, and 49.9 per cent had used it in the last month. The rates were 46 per cent and 30.7 per cent, respectively, for females. About 39 per cent had used alcohol in the last 30 days (49 per cent

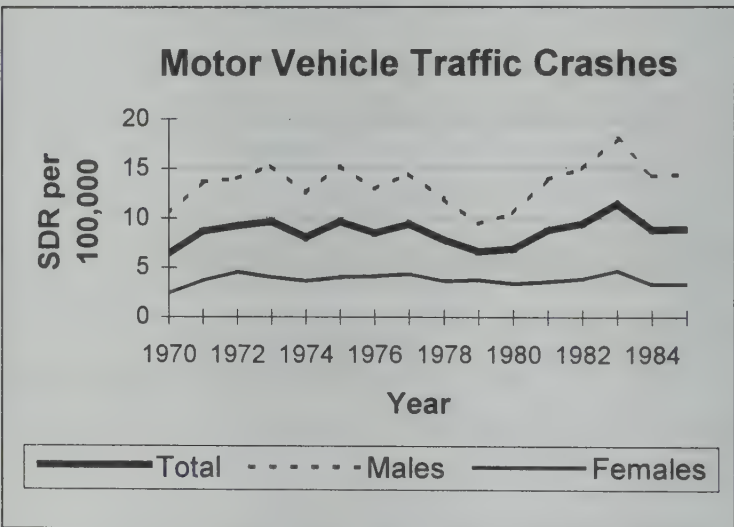
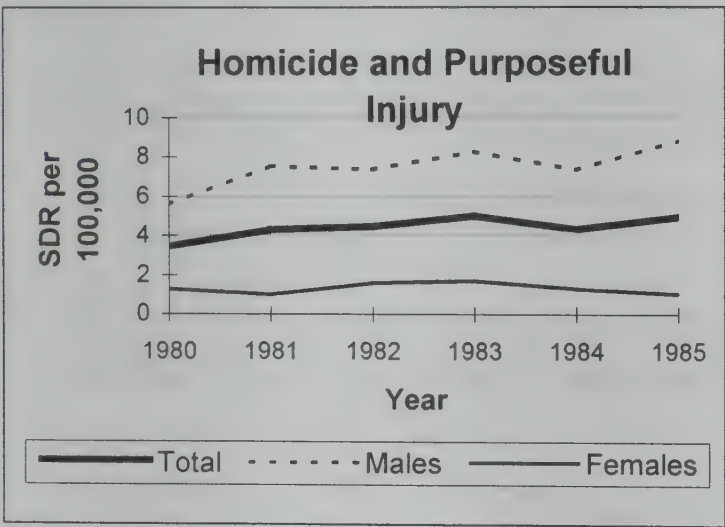
of men and 30 per cent of women). Men in their mid-20s had the highest rates of prevalence, and both male and female prevalence rates appeared to peak at or around the age of 25.

Mortality, morbidity, health and social problems from alcohol use



Mortality

An observational, clinical and comparative study was made of the BAC levels in patients who were victims of a homicide or involved in a motor vehicle crash, and were sent to the emergency room at the Fco. E. Moscoso Puello and Dr. Luis E. Aybar hospitals of Santa Domingo. The information was collected between July and September of 1989. Seventy-eight per cent of the studied cases presented BAC levels over the accepted values.



Ecuador

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	7 961 000	10 264 000	11 460 000
Adult (15+)	4 553 000	6 266 000	7 286 000
% Urban	47.0	54.8	58.4
% Rural	53.0	45.2	41.6

Health status

Life expectancy at birth, 1990-1995 : 66.4 (males), 71.4 (females)
Infant mortality rate in 1990-1995 : 50 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1390, PPP estimates of GNP per capita (current int'l \$), 1995: 4220.

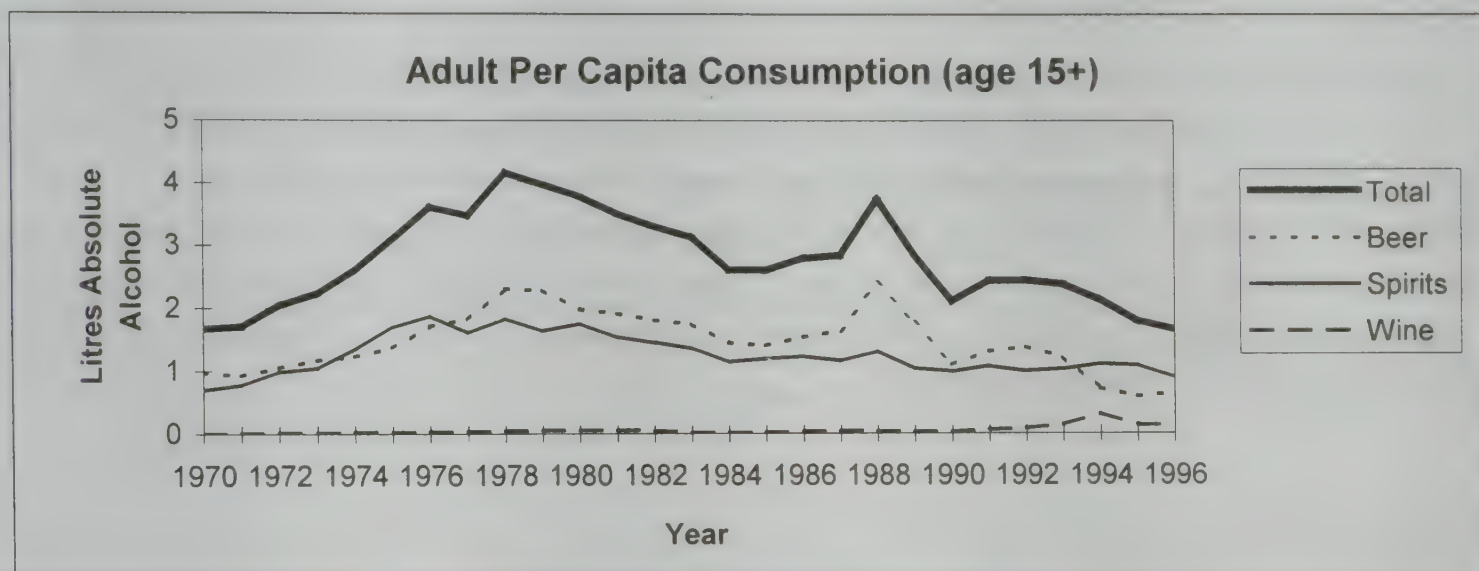
Average distribution of labour force by sector, 1990-1992 : agriculture 33%; industry 19%; services 48%

Adult literacy rate (per cent), 1995 : total 90; male 92; female 88

Alcohol production, trade and industry

Ecuador produces beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption comes primarily from beer and spirits. Clandestine production of alcohol, destined almost exclusively for domestic consumption, was estimated by PAHO to be three times the volume of controlled production.

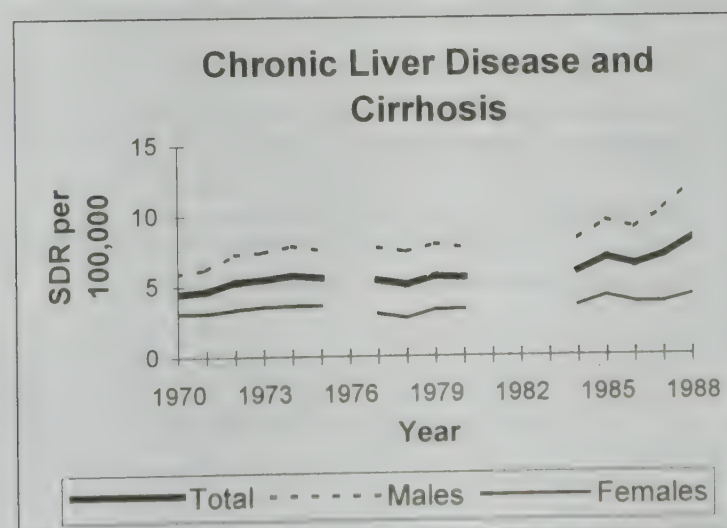
Prevalence

In a 1989 survey of 6147 randomly selected persons aged 10 years and older from both urban and rural areas, 75.7 per cent had used alcohol at some time in their lives. Thirteen per cent consumed alcohol daily. Non-defined "pathological drinking" was found to be associated with the wine-producing areas, and the male to female ratio for this pathology was nine to one. The proportion of non-drinkers in the country was 23.6 per cent, these being predominantly women.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

According to the Ministry of Health, the rate of alcohol dependence per 100 000 inhabitants rose from 23.26 to 25.81 between 1994 and 1996. In 1988, the most recent year for which statistics were available, there were 2367 hospital discharges (2249 males and 118 females), and 16 deaths (15 males and one female) from alcohol dependence syndrome.



Mortality

In 1988, there were 172 deaths (136 males and 36 females) and 882 hospital discharges (521 males and 261 females) from cirrhosis.

Alcohol policies

Control of alcohol products

Alcoholic beverages may not be sold in education or health institutions. The advertising of alcoholic beverages on television is permitted only between 20:30 and 04:00 hours. Alcohol advertising in cinemas is allowed after 19:00 hours.

A warning label is required on beverages with an alcohol content of six per cent or more. The warning reads: "The excessive consumption of alcoholic beverages may cause health and family problems."

Alcohol data collection, research and treatment

The Ministry of Health is responsible for the health care of drug dependent persons. There are numerous support groups within the community. Some have a religious affiliation and others are part of an international network, such as Alcoholics Anonymous groups. Treatment is provided in psychiatric hospitals and outpatient clinics.

El Salvador

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 525 000	5 172 000	5 768 000
Adult (15+)	2 443 000	2 923 000	3 422 000
% Urban	41.5	43.9	45.0
% Rural	58.5	56.1	55.0

Health status

Life expectancy at birth, 1990-1995 : 63.9 (males), 68.8 (females)

Infant mortality rate in 1990-1995 : 46 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1610, PPP estimates of GNP per capita (current int'l \$), 1995: 2610.

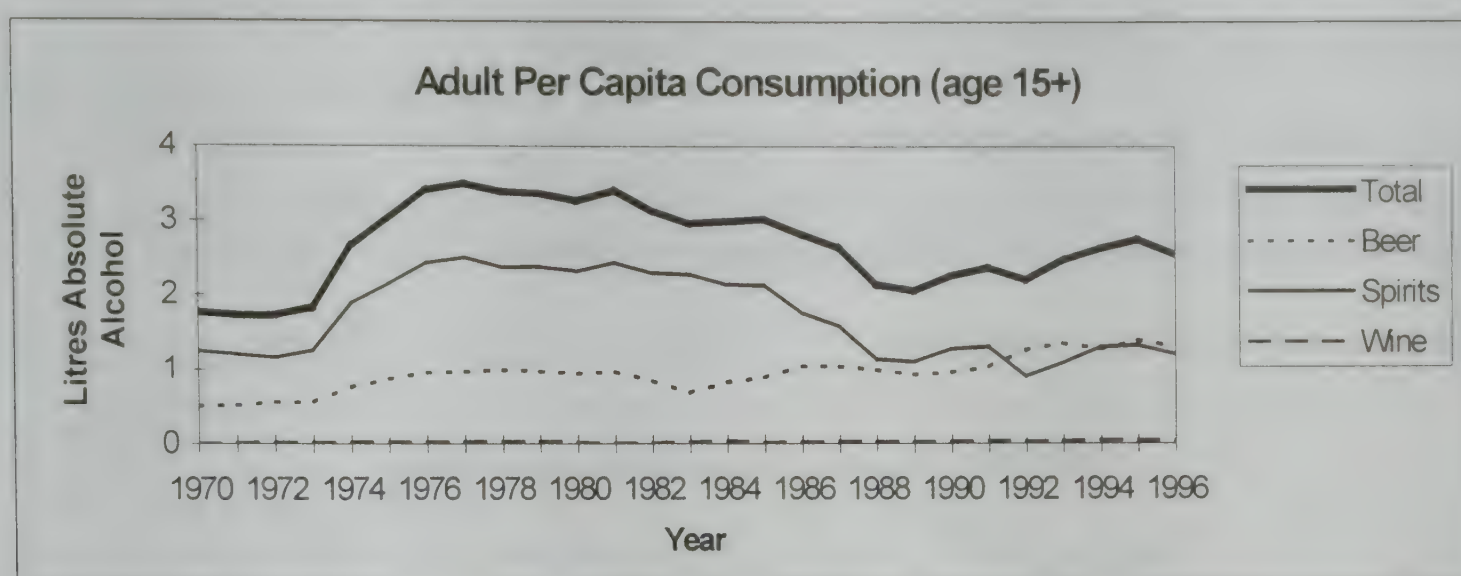
Average distribution of labour force by sector, 1990-1992 : agriculture 11%; industry 23%; services 66%

Adult literacy rate (per cent), 1995 : total 71; male 73; female 70

Alcohol production, trade and industry

El Salvador produces beer, wine and spirits. The country's only brewer, La Constancia, has a joint venture distribution agreement with Anheuser-Busch, the world's largest brewer, and contract brews Guinness Stout for the local market.

Alcohol consumption and prevalence



Consumption

Recorded beer consumption has grown steadily in recent years, and consumption of distilled spirits has fallen. There are no data available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Alcohol policies

Control of alcohol products

There are no provisions for controlling the number of establishments selling alcohol. Production and marketing of alcohol are regulated by the Ministry of Finance through the Office of Income Administration, but this office does not have the resources necessary to monitor retail sales. Measures are reportedly in force to regulate the advertising of alcoholic beverages.

Control of alcohol problems

Educational institutions for health professionals generally restrict education on drug problems to a few hours.

Alcohol data collection, research and treatment

The Mental Health Department of the Ministry of Public Health is responsible for dealing with drug problems. There are no statistics on the number of persons who request and receive treatment. Some treatment is carried out in the psychiatric hospital, but there is no specific assignment of beds for treatment of alcohol-related conditions.

Guatemala

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 917 000	9 197 000	10 621 000
Adult (15+)	3 744 000	5 020 000	5 913 000
% Urban	37.4	39.5	41.5
% Rural	62.6	60.5	58.5

Health status

Life expectancy at birth, 1990-1995 : 62.4 (males), 67.3 (females)
 Infant mortality rate in 1990-1995 : 49 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1340, PPP estimates of GNP per capita (current int'l \$), 1995: 3340.

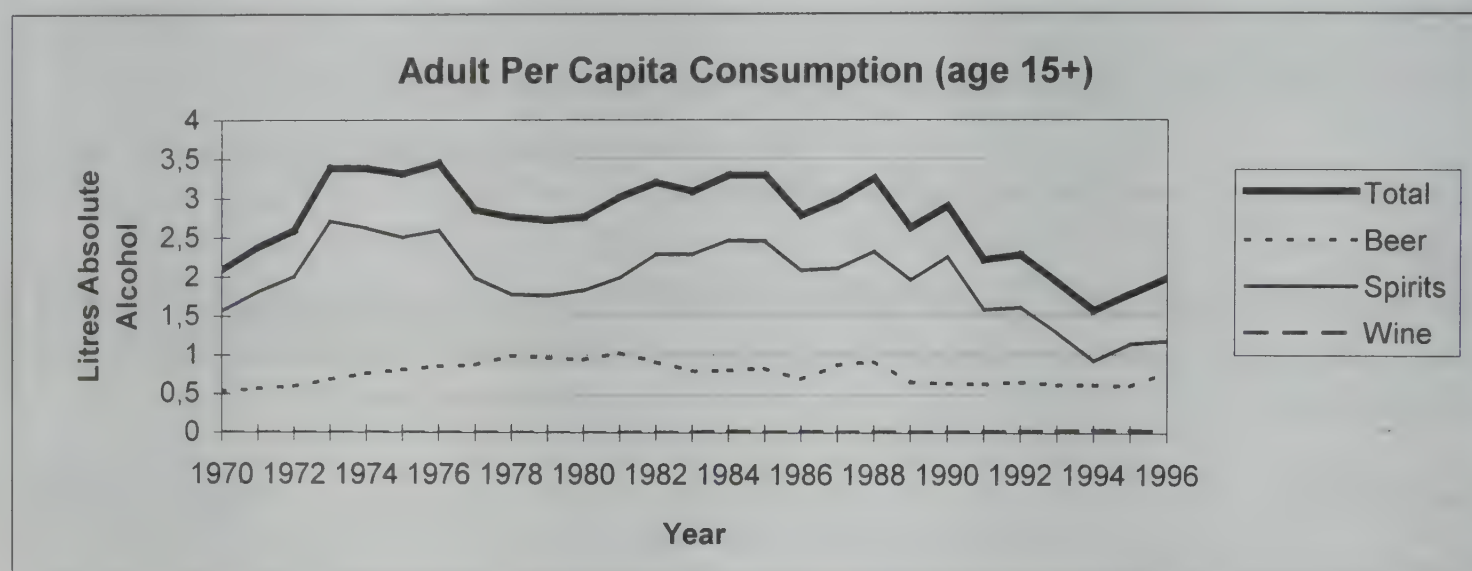
Average distribution of labour force by sector, 1990-1992 : agriculture 50%; industry 18%; services 32%

Adult literacy rate (per cent), 1995 : total 56; male 65; female 48

Alcohol production, trade and industry

Guatemala produces beer and distilled spirits. In 1994, the brewing company Cerveceria Centroamerica signed an agreement to distribute Anheuser-Busch products in Guatemala.

Alcohol consumption and prevalence



Consumption

Distilled spirits is the alcoholic beverage of choice in Guatemala. Wine consumption is very low, and comes entirely from imports. There are no data available on consumption of smuggled or informal or home-production of alcoholic beverages.

Prevalence

A 1990 random sample of 1807 urban residents aged 12 to 45 years found that 57 per cent had used alcohol at some point in their life (65 per cent of men and 48 per cent of women), and that approximately 26 per cent had used alcohol in the last 30 days (33 per cent of men and 19 per cent of women). Males in their 30s had the highest rates of prevalence, and the rates for both males and females increased with age.

Alcohol policies

Control of alcohol products

The alcohol beverage industry is a private industry that operates according to the free market. Imports are regulated. The Law on Alcohol regulates the production, marketing, importation and exportation of alcoholic beverages, but in practice it is not enforced.

Alcohol data collection, research and treatment

In 1985 the National Commission for the Prevention of Drug and Alcohol Abuse was founded, and in 1986 a programme was initiated to train multidisciplinary personnel at the primary health care level in diagnosis and treatment of alcohol dependence and drug abuse, with emphasis on joint work with Alcoholics Anonymous. There are almost 750 Alcoholics Anonymous groups, 450 of which are located in the capital.

Guyana

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	759 000	796 000	835 000
Adult (15+)	450 000	530 000	565 000
% Urban	30.5	33.6	36.2
% Rural	69.5	66.4	63.8

Health status

Life expectancy at birth, 1990-1995 : 62.4 (males), 68.0 (females)

Infant mortality rate in 1990-1995 : 48 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 590, PPP estimates of GNP per capita (current int'l \$), 1995: 2440.

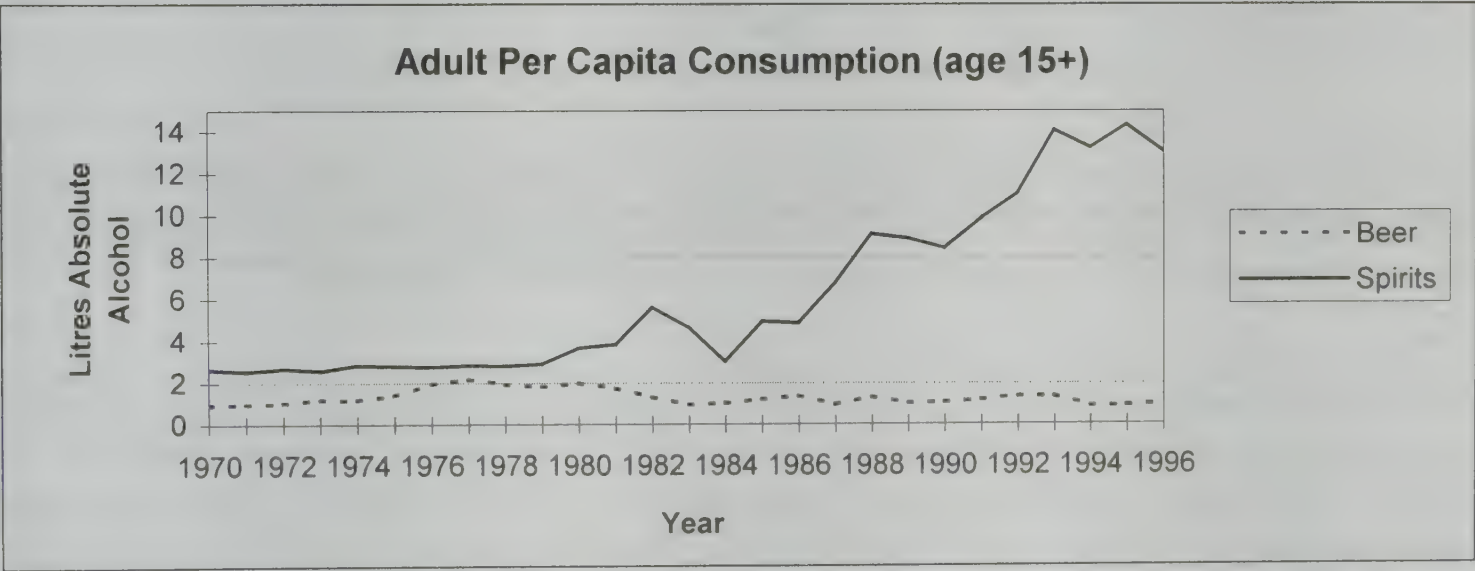
Average distribution of labour force by sector, 1990-1992 : agriculture 27%; industry 26%; services 47%

Adult literacy rate (per cent), 1995 : total 97; male 99; female 96

Alcohol production, trade and industry

Guyana produces beer and distilled spirits, and is a significant exporter of distilled spirits.

Alcohol consumption and prevalence



Consumption

Recorded wine consumption is very low, and figures are unavailable beyond 1983. The alcoholic beverage of choice is distilled spirits, and consumption of spirits has risen steadily since 1984.

Haiti

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 353 000	6 486 000	7 180 000
Adult (15+)	3 174 000	3 876 000	4 291 000
% Urban	23.7	28.6	31.6
% Rural	76.3	71.4	68.4

Health status

Life expectancy at birth, 1990-1995 : 55.0 (males), 58.3 (females)

Infant mortality rate in 1990-1995 : 86 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 250, PPP estimates of GNP per capita (current int'l \$), 1995: 910.

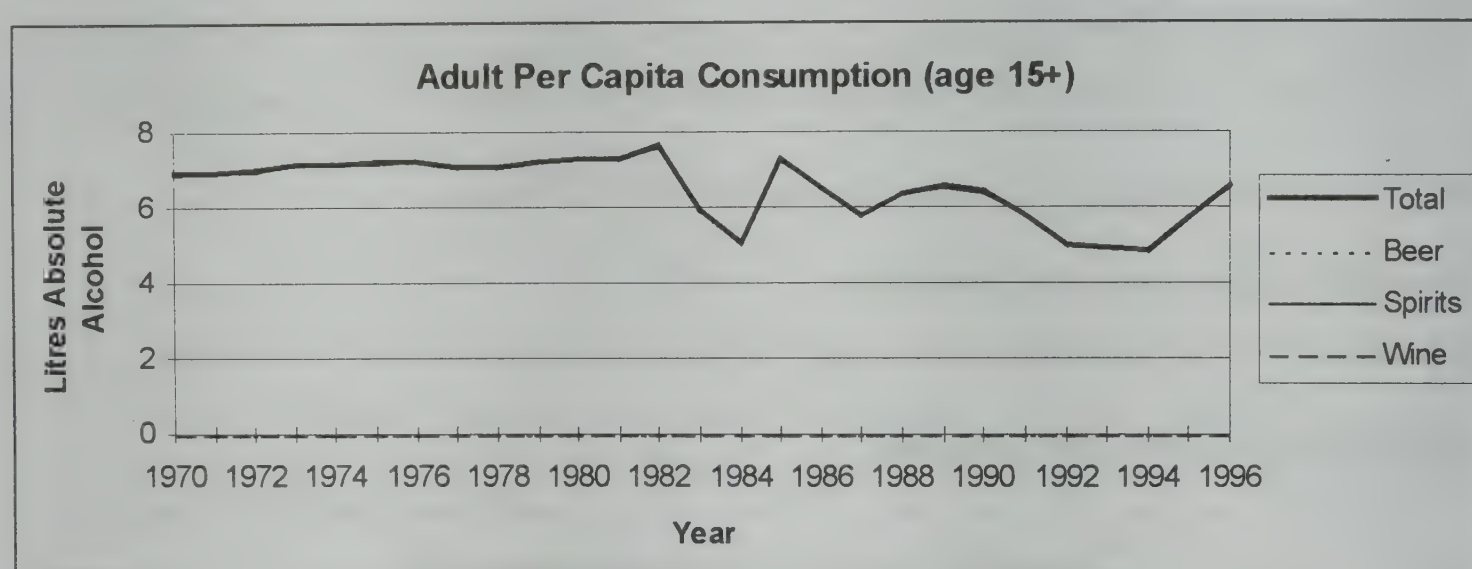
Average distribution of labour force by sector, 1990-1992 : agriculture 68%; industry 9%; services 23%

Adult literacy rate (per cent), 1995 : total 45; male 48; female 42

Alcohol production, trade and industry

Haiti produces beer, and imports wine and spirits.

Alcohol consumption and prevalence



Consumption

Distilled spirits consumption dominates total alcohol consumption. Recorded beer and wine consumption are so low they do not appear on the graph above. There is no information available on consumption of smuggled or informally- or home-produced alcoholic beverages.

Prevalence

In a 1990 random sample of 2100 urban residents between the ages of 12 and 45, 58 per cent had used alcohol at some time in their life (60 per cent of men and 56 per cent of women), and 5 per cent had used alcohol in the last 30 days (6 per cent of men and 4 per cent of women). Males consistently had the highest rates of prevalence across the life span. Prevalence among women was extremely low, peaking at less than 10 per cent between the ages of 40 and 44.

Honduras

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 569 000	4 879 000	5 654 000
Adult (15+)	1 884 000	2 673 000	3 179 000
% Urban	34.9	40.7	43.9
% Rural	65.1	59.3	56.1

Health status

Life expectancy at birth, 1990-1995 : 65.4 (males), 70.1 (females)

Infant mortality rate in 1990-1995 : 43 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 600, PPP estimates of GNP per capita (current int'l \$), 1995: 1900.

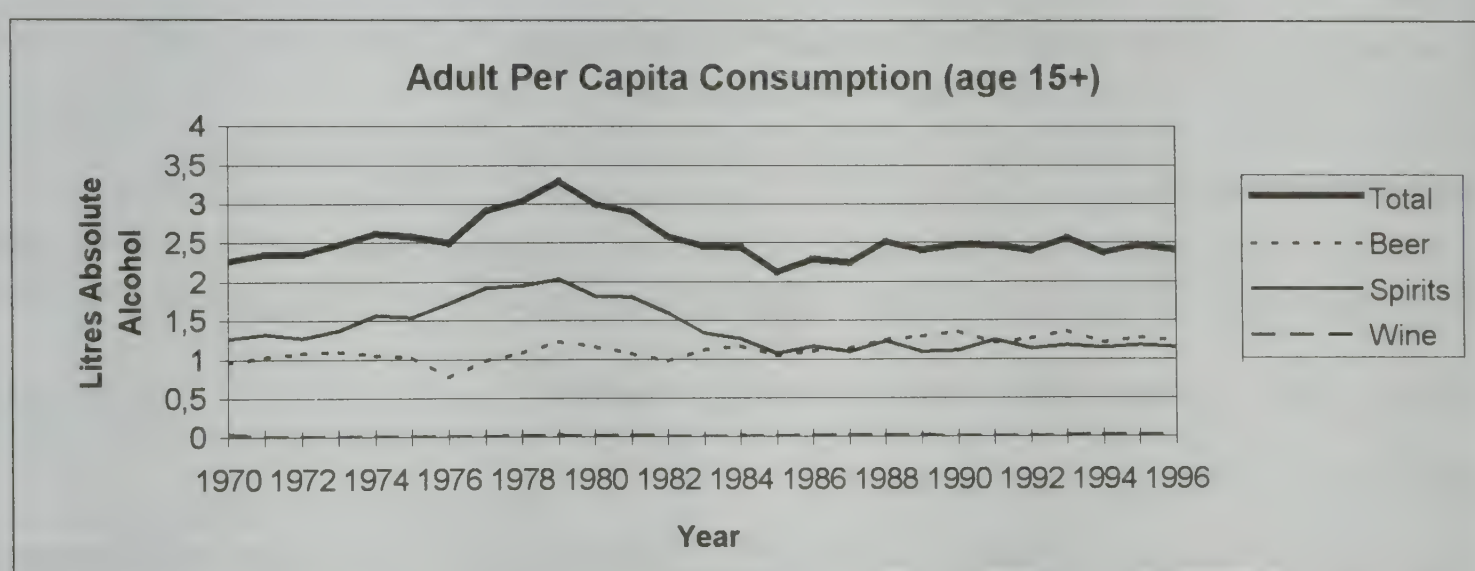
Average distribution of labour force by sector, 1990-1992 : agriculture 38%; industry 15%; services 47%

Adult literacy rate (per cent), 1995 : total 73; male 73; female 73

Alcohol production, trade and industry

Honduras produces beer, and imports wine and spirits. Cerveceria Hondurena, a local brewer, signed a joint venture distribution agreement in 1994 with Anheuser-Busch, the world's largest brewer, to distribute its products in Honduras.

Alcohol consumption and prevalence



Consumption

The unrecorded production and consumption of alcoholic beverages is considered to constitute a substantial portion of the market. In rural areas, *aguardiente* which is a traditional spirit and rum are the drinks of preference; in urban areas, beer is favoured.

Prevalence

A 1979 study on alcohol use and problems showed that most male drinkers began consuming alcohol before age 15, and most women after age 17.

Alcohol policies

Control of alcohol products

Hours of sale of alcohol are regulated, but not always complied with.

Aguardiente is the only alcoholic beverage that is subject to special sales regulation. All mass media publicity or propaganda that induces the young to drink alcoholic beverages, associates the use of such beverages with sports, or offends the dignity of the women is prohibited.

Control of alcohol problems

The minimum legal drinking age is 21. The Honduran Institute for the Prevention and Treatment of Alcoholism, Drug Addiction and Drug Abuse deals with primary prevention. Attention is focused particularly on secondary school students. The Mental Health Division of the Ministry of Public Health conducts an undergraduate programme for medical students and a training programme for graduate physicians who work in mental health clinics.

Alcohol data collection, research and treatment.

Treatment is provided by psychiatrists and psychologists as well as by private religious institutions. Professional help with alcohol problems is more frequently sought by members of the upper social

classes, and traditional healers assist those in the low income classes and in rural areas. There are no formal programmes for social reintegration of persons in recovery from alcohol dependence.

Jamaica

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 133 000	2 366 000	2 447 000
Adult (15+)	1 275 000	1 582 000	1 693 000
% Urban	46.8	51.5	53.7
% Rural	53.2	48.5	46.3

Health status

Life expectancy at birth, 1990-1995 : 71.4 (males), 75.8 (females)
Infant mortality rate in 1990-1995 : 14 per 1000 live births

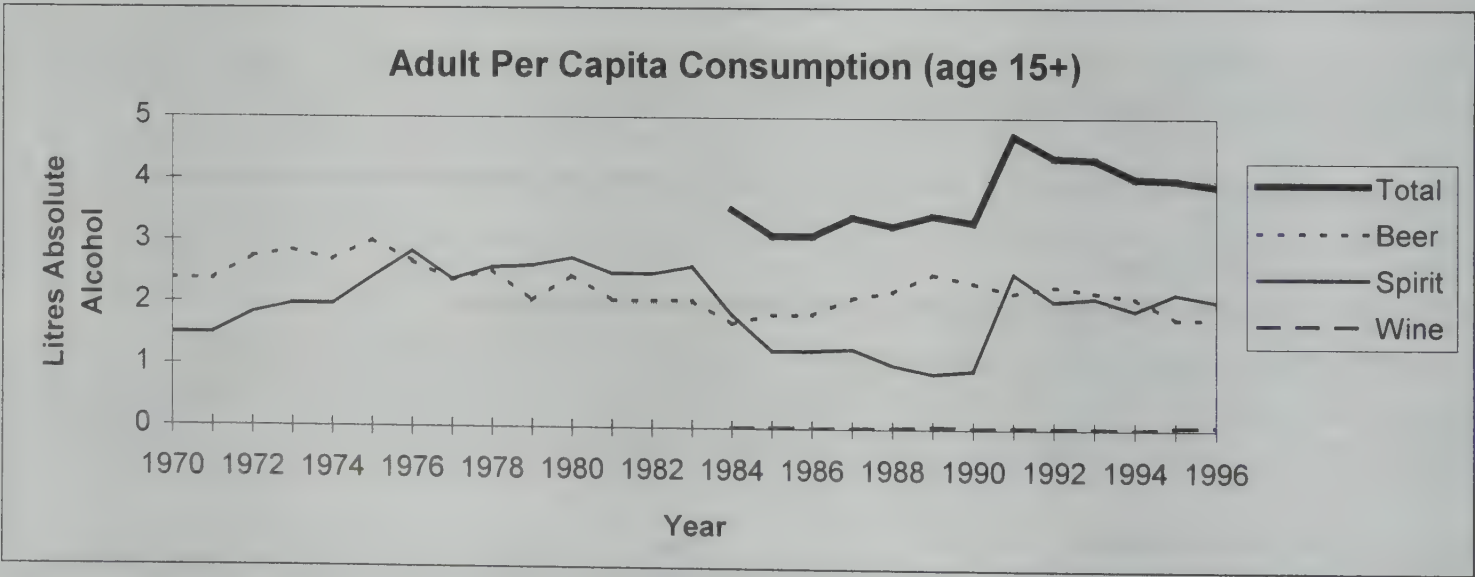
Socioeconomic situation

GNP per capita (US\$), 1995: 1510, PPP estimates of GNP per capita (current int'l \$), 1995: 3540.
Average distribution of labour force by sector, 1990-1992 : agriculture 26%; industry 24%; services 50%
Adult literacy rate (per cent), 1995 : total 85; male 81; female 89

Alcohol production, trade and industry

Jamaica produces and exports a substantial amount of distilled spirits, mostly rum, and also produces and exports beer. Exports of the country's Red Stripe beer increased in the early 1990s after it was featured in the film *The Firm*. In 1993, the transnational brewing and distilling company Guinness acquired 51 per cent of Desnoes & Geddes, the Jamaican producers of Red Stripe beer.

Alcohol consumption and prevalence



Consumption

The alcoholic beverages of choice are distilled spirits and beer. Very little wine is consumed in Jamaica, although in 1994 recorded wine consumption doubled from its 1992 level. There are no data available on consumption of smuggled or informally- or home-produced alcoholic beverages.

Prevalence

In a 1990 national sample of 5000 residents aged 15 years and older, from both rural and urban areas, 32 per cent had used alcohol at some time in their lives (45 per cent of men and 20 per cent of women).

In 1987, a total of 6007 persons representing the household population of Jamaica 12 years and older were interviewed in their homes. About 84.8 per cent of males and 64.2 per cent of females reported ever using alcohol. Approximately 35 per cent of males 20 to 40 years old reported having had five or more drinks on the same occasion at least once in the two weeks before they were interviewed compared to between seven and nine per cent of females of the same age. Comparable figures on excessive alcohol consumption for males and females 40 years old and over were 36 per cent and four per cent, respectively.

Age Patterns

A 1987 study of 8886 post-primary students indicated that three out of every four students (76.3 per cent) had consumed alcohol during their lifetime, and one in every three students (33.3 per cent) drank alcohol during the 30 days period before the survey. Male lifetime prevalence rates were higher than those of females (84.7 per cent and 68.9 per cent, respectively). The lifetime prevalence increased progressively with age, rising from 71.2 per cent in the 13 to 14 age group to 86.8 per cent in the 19 to 21 age group.

Mortality, morbidity, health and social problems from alcohol use

Health problems

A study of 35 patients diagnosed with chronic pancreatitis between 1976 and 1990 (29 men and six women, ages ranging from 21 to 67 with a mean of 45) found that 77 per cent had a history of chronic alcohol abuse.

Mexico

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	67 056 000	84 511 000	93 674 000
Adult (15+)	37 320 000	52 345 000	60 049 000
% Urban	66.3	72.6	75.3
% Rural	33.7	27.4	24.7

Health status

Life expectancy at birth, 1990-1995 : 67.8 (males), 73.9 (females)
Infant mortality rate in 1990-1995 : 36 per 1000 live births

Socioeconomic situation

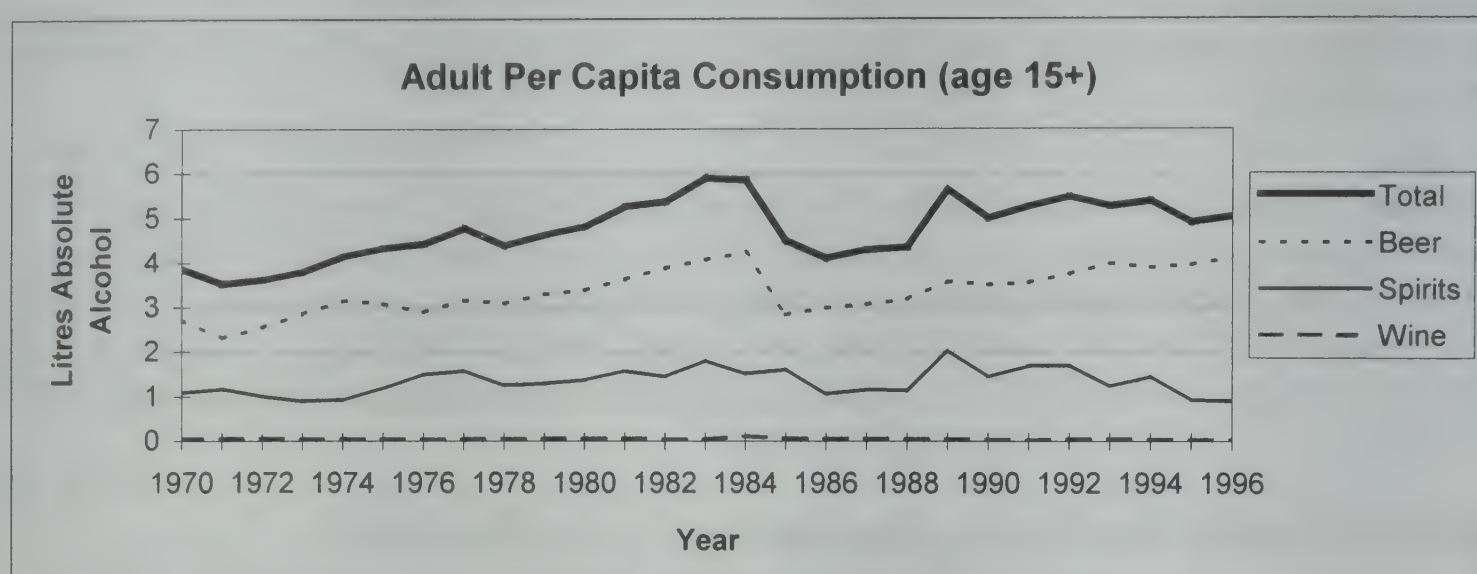
GNP per capita (US\$), 1995: 3320, PPP estimates of GNP per capita (current int'l \$), 1995: 6400.
Average distribution of labour force by sector, 1990-1992 : agriculture 23%; industry 29%; services 48%
Adult literacy rate (per cent), 1995 : total 90; male 92; female 87

Alcohol production, trade and industry

Mexico is the world's seventh largest beer market, dominated by two firms: Grupo Modelo, which is 51 per cent owned by Anheuser-Busch, controls 57 per cent of the beer market, while Fomento Economico Mexicano (FEMSA) controls the remainder. There are very few speciality beers made in Mexico and imports make up less than one per cent of the market. Two firms, Allied-Domecq and Bacardi, also control 90 per cent of the brandy and rum markets. The tequila industry is less concentrated. Tequila production in 1996 increased 27.5 per cent and exports increased 14 per cent. However, brandy and rum have outstripped it in popularity despite its being the national beverage. Recent changes in trade policy have led to an explosion of imports as well as an increase in exports. Between 1980 and 1993, imports of distilled spirits doubled while exports fell by more than one half.

Exports of wines grew by six hundred per cent while imports increased slightly. Beer imports and exports both increased, posting 1993 levels six and 44 times those of 1980, respectively.

Alcohol consumption and prevalence



Consumption

Beer is the alcoholic beverage of choice in terms of recorded consumption. The 1989 National Household Survey (see below) estimated per capita intake at 4.6 litres, per capita intake of drinkers at 5.6 litres, and per capita intake of drinking males at 8.1 litres. The survey estimated that 19 per cent of total consumption was in informally produced beverages such as *aguardiente*, *pulque* and 96 proof alcohol. These figures are probably low for two reasons: respondents to surveys tend to under-report their consumption, and the survey did not include rural areas (25 per cent of the population). Prevalence surveys have indicated that rural consumption of such beverages is four times as common as in urban areas.

Prevalence

In a 1993 survey of 18 737 permanent residents of Mexico conducted throughout eight regions, 77 per cent of males and 57.5 per cent of females were found to have consumed alcohol in the previous two years. Of the total sample, 23 per cent had consumed five or more drinks per occasion. In the 1993 National Survey on Addictions (NSA), using a national sample of 10 879, 74 per cent reported ever using alcohol, 65 per cent reported using in the past year, 24 per cent had drunk alcohol in the past thirty days, and two per cent had drunk five or more drinks at one sitting at least once per week.

In 1991 the NSA estimated that 0.5 per cent of the urban population of the country drank *aguardientes* (96 proof alcohol). Data from the NSA in 1989 showed that the population that drank this type of beverage was mainly male (4.6 per cent), with low participation of females (0.4 per cent).

The NSA, defining abstention as no alcohol consumption in the previous 24 months, estimated the abstention rate at 25 per cent in 1989. When abstention was defined as no alcohol consumption in the previous 12 months, the rate reached 46 per cent (27 per cent of males and 63 per cent of females aged 18 years and older). In the same year, the national household survey showed that 25 per cent of the drinkers consumed 78 per cent of the available alcohol.

A 1988 survey of a random sample of 12 557 individuals between the ages of 12 and 65 from urban localities of greater than 2500 inhabitants reported that 82 per cent of males and 44 per cent of females had consumed alcohol during the last 12 months. Daily consumption was uncommon, while consumption to the point of intoxication was frequent. Approximately 31 per cent of males and five per cent of females between the ages of 18 and 65 were frequent heavy users (once a week or more often, at least five drinks per occasion).

Age patterns

The NSA of 1993 reported that in the two years prior to the survey, 54 per cent of the population between 12 and 18 years-old had used alcohol, compared with 70 per cent of those between 19 and 65 years-old. In both groups males were three times more likely than females to use alcohol.

A high school survey conducted in Mexico City in 1993 estimated that 9.2 per cent of the students had used "coolers" (a prepared cocktail or canned beverage combining rum and coke), 9.1 per cent had consumed beer, 7 per cent had used spirits and 5.6 per cent had drunk wine.

The 1990 NSA showed that 28 per cent of those aged 12 to 17 years (32 per cent of males and 23 per cent of females), and 53 per cent of those aged 18 to 65 years (74 per cent of males and 36 per cent of females) were current drinkers. Approximately 4.4 per cent of 12 to 17 year-olds (7.2 per cent of males and 1.4 per cent of females) and 17 per cent of 18 to 65 year-olds (31 per cent of men and 5 per cent of women) drank once a week or more. Males and females between 30 and 39 were the most likely to drink heavily.

Use among population subgroups

Higher income groups are more likely to drink wine, brandy, rum or other prepared alcoholic beverages, while those in the lower income groups are more likely to drink *pulque*, *aguardientes* or beer.

A 1986 survey conducted in a public general hospital found that 10 per cent of the patients treated in the emergency room, four per cent of the hospitalized patients and three per cent of those given outpatient consultations were "heavy drinkers".

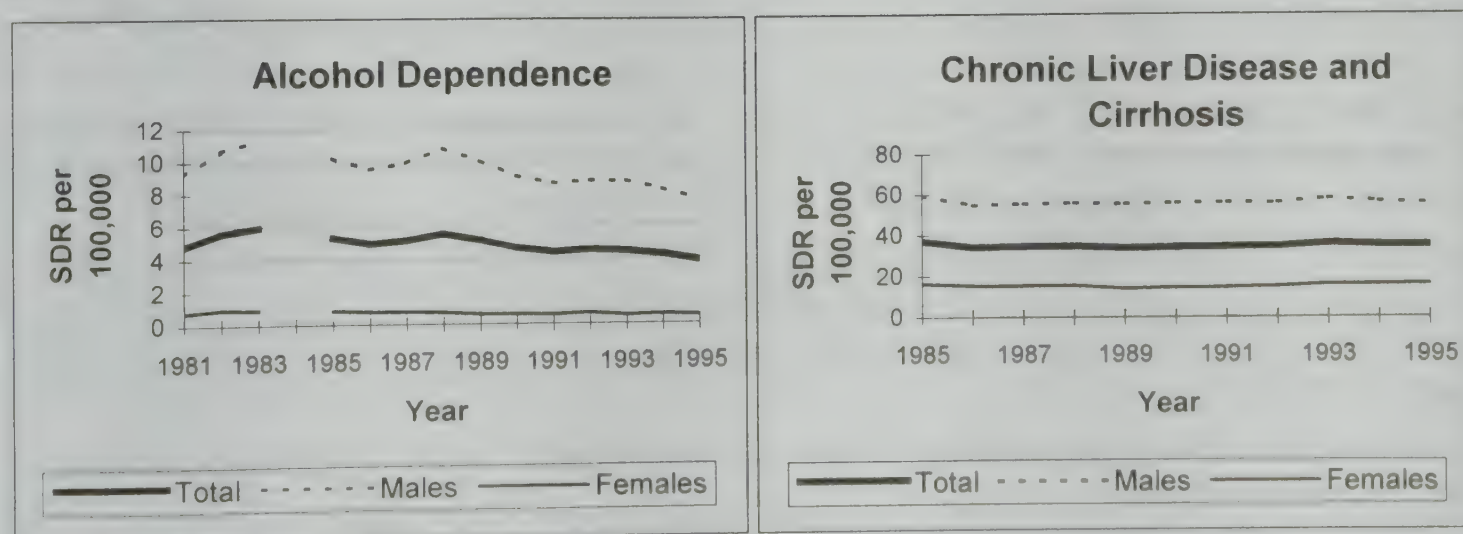
Economic impact of alcohol

Alcohol beverage sales totalled US\$ 2.3 billion in 1995, 74 per cent of which derived from beer. Households earning incomes in the two lowest deciles spend a far greater percentage of their income on alcoholic beverages than those in the two highest income deciles. Nationally, households spend an average of one per cent of household income on alcoholic beverages. This figure is doubled in rural areas.

Mortality, morbidity, health and social problems from alcohol use

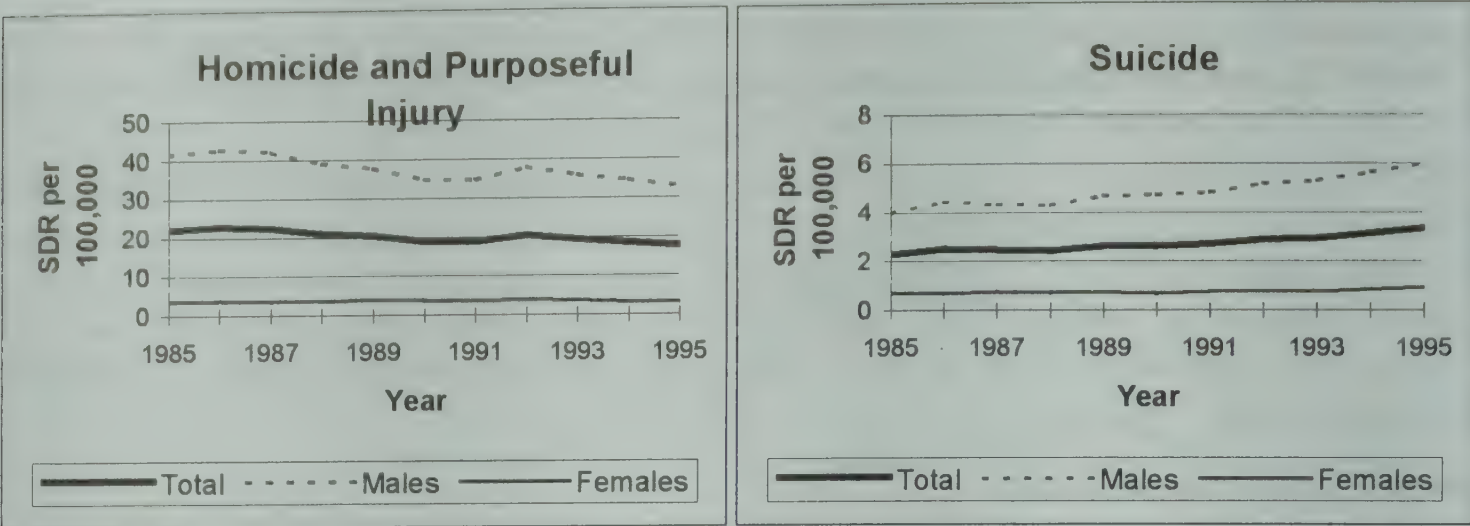
Alcohol dependence and related disorders

The 1989 Mexican National Survey on Addiction, carried out between February and July of 1988, used a multi-stage stratified sampling design, selecting households at random, and then interviewing one individual per household for a total of 12 557 interviews representing a response rate of 84 per cent. The sample is considered to be representative of the urban population of Mexico aged 12 to 65 years, representing 65 per cent of the total population. In the survey, men were at nearly six times higher risk for alcohol-related problems such as dependence, traffic crashes, work problems, accidents and family problems. The lowest risk of dependence was among 15 to 17 year-olds, and the highest risk was found in the 30 to 39 year age group. In total, about 12 per cent of male users and 0.6 per cent of female users aged 18 to 65 years met WHO International Classification of Disease (ICD) criteria for alcohol dependence.



Mortality

Almost 50 per cent of those convicted of homicide in 1985 admitted to having consumed alcoholic beverages to excess before the crime. Twenty-four per cent of the reported suicides in 1980 had a significant history of alcohol-related problems, and 38 per cent had BAC exceeding 0.10 g%.

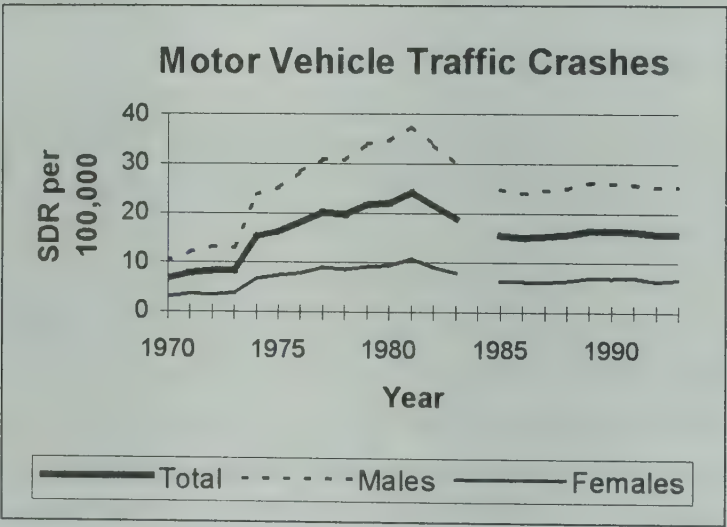


Morbidity

In a 1991 cross-sectional study of eight emergency hospitals among patients over the age of 15, 17 per cent tested positive on the breathalyser, and 21 per cent of all patients had consumed alcohol in the six hours before the emergency occurred. A 1988 survey of a random sample of emergency room admissions showed that in 22 per cent of the traumatic events evaluated, patients had evidence of alcohol in their blood. A 1986 survey conducted in a public general hospital found that 10 per cent of the patients treated in the emergency room, four per cent of the hospitalized patients and three per cent of those given outpatient consultations were “heavy drinkers” (no definition given).

Social Problems

According to the 1989 Mexican National Survey on Addiction, 4.8 per cent of 5957 people surveyed reported having been in alcohol-related traffic crashes (8.2 per cent of men and 0.6 per cent of women). The percentage of automobile crashes occurring when the driver was drunk increased from 8 per cent in 1968 to 16 per cent in 1983.



In a random sample of 1590 women from urban and rural zones who had attended *DIF* (*Desarrollo Integral de la Familia*) counselling services in 1992, approximately 25 per cent of urban women associated maltreatment with the offender’s state of drunkenness. Among the women who experienced domestic violence (56.7 per cent in urban, 44.2 in rural zones), the proportion whose aggressor was under the influence of alcohol was 8.8:1 in rural and 4.2:1 in urban areas.

In a 1987 survey carried out in three hospitals in Acapulco, all patients involved in assaults or fights were interviewed and breath tested. Positive breathalyser results were associated with a relative risk of 5.23, increasing to 14.49 in those patients who consumed more than 100 grams of pure alcohol prior to the assault or fight.

Between 1964 and 1984, approximately 20 per cent of recorded crimes in Mexico were carried out under the influence of alcohol.

Alcohol policies

Control of alcohol products

The taxation law in force since 1982 set rates for locally-produced as well as imported alcoholic beverages. The tax rate for beer is 21.5 per cent, for table wines 15 per cent, and for distilled beverages 40 per cent. Taxes are adjusted annually by the Sub-Ministry of Foreign Commerce and Industry Development.

Each State licenses establishments to sell alcoholic beverages. The number of alcohol outlets per 100 000 inhabitants increased from 303 in 1970 to 378 in 1985. As a result of recent changes in trade policy (notably signing of the NAFTA and GATT accords), taxes on imported alcoholic beverages have fallen from 80 per cent to 10 per cent of the price of the beverage.

The Ministry of Health has the responsibility for authorizing advertising of alcoholic beverages. Every commercial advertisement must have a warning label, the content of which should discourage alcohol abuse and encourage moderation. Alcoholic beverage containers must have a warning label concerning the adverse health effects of alcohol, which reads as follows: "The abuse in the consumption of this product is injurious to health."

Control of alcohol problems

It is forbidden to sell alcohol to persons under 18 years of age. Consumption of alcohol in the work place is prohibited, and bars and canteens selling alcoholic beverages may not function near places of work. The Committee on Education of the National Council on Addictions works with the Autonomous University of Mexico to offer comprehensive courses on alcohol problems in its medical curriculum, and with the Mexican Institute of Psychiatry for training of physicians and others working in the alcohol field.

Alcohol data collection, research and treatment

The National Institute of Statistics, Geography and Informatics and the Centre for Information on Addictions are both involved in collecting data of various kinds regarding alcohol. The Mexican Social Research Institute of Alcohol Studies is involved with policy and prevention.

The National Council on Addictions, which includes representatives of social, governmental and private sectors coordinated by the Ministry of Health, has developed a national programme with treatment as a priority and coordinates work with various institutions. There are few specialized treatment programmes for alcohol problems: mostly this work is carried out through other programmes, usually in the form of acute detoxification centres.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Mexico.

Nicaragua

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 802 000	3 676 000	4 433 000
Adult (15+)	1 469 000	1 916 000	2 397 000
% Urban	53.4	59.8	62.9
% Rural	46.6	40.2	37.1

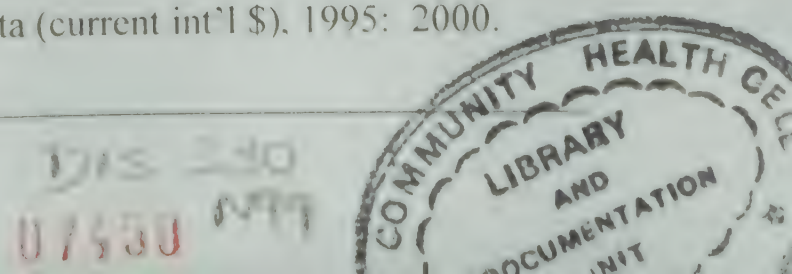
Health status

Life expectancy at birth, 1990-1995 : 64.8 (males), 68.5 (females)

Infant mortality rate in 1990-1995 : 52 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 380, PPP estimates of GNP per capita (current int'l \$), 1995: 2000.



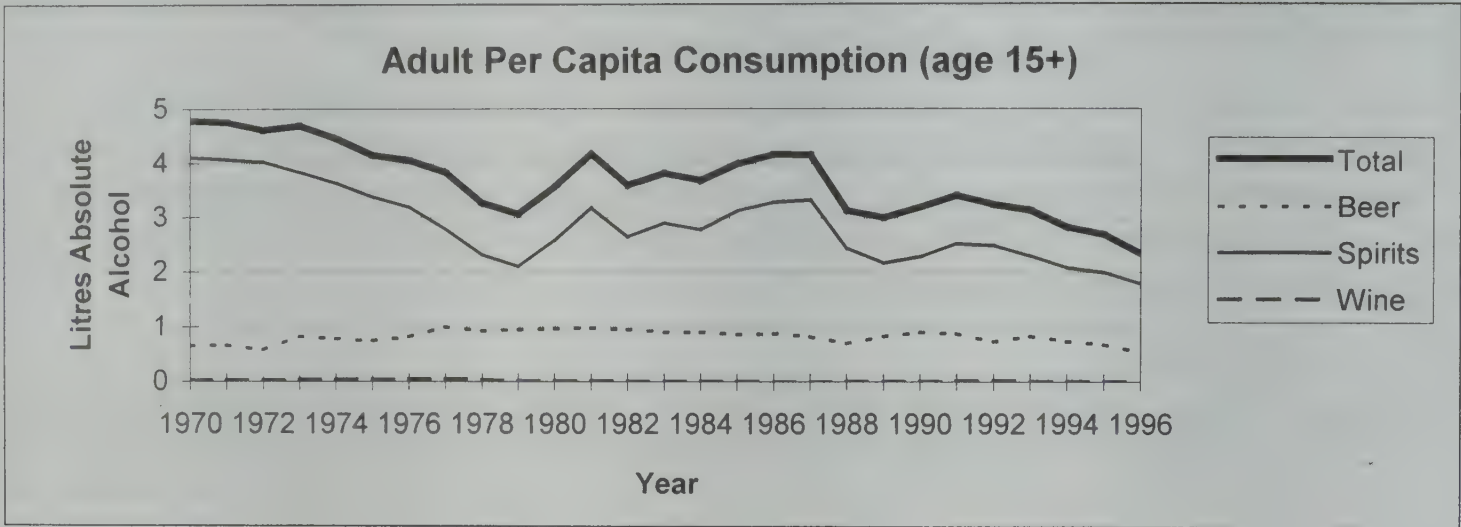
Average distribution of labour force by sector, 1990-1992 : agriculture 46%; industry 16%; services 38%

Adult literacy rate (per cent), 1995 : total 66; male 65; female 67

Alcohol production, trade and industry

Nicaragua produces beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice in Nicaragua is distilled spirits. The apparent decline since the early 1990s is a result of an increase in exports, at the same time, available data suggest that spirits production has remained unchanged. There are no data available regarding consumption of smuggled or home- or illicit alcohol production.

Panama

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 950 000	2 398 000	2 631 000
Adult (15+)	1 163 000	1 552 000	1 753 000
% Urban	49.7	51.7	53.3
% Rural	50.3	48.3	46.7

Health status

Life expectancy at birth, 1990-1995 : 70.9 (males), 75.0 (females)

Infant mortality rate in 1990-1995 : 25 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2750, PPP estimates of GNP per capita (current int’l \$), 1995: 5980.

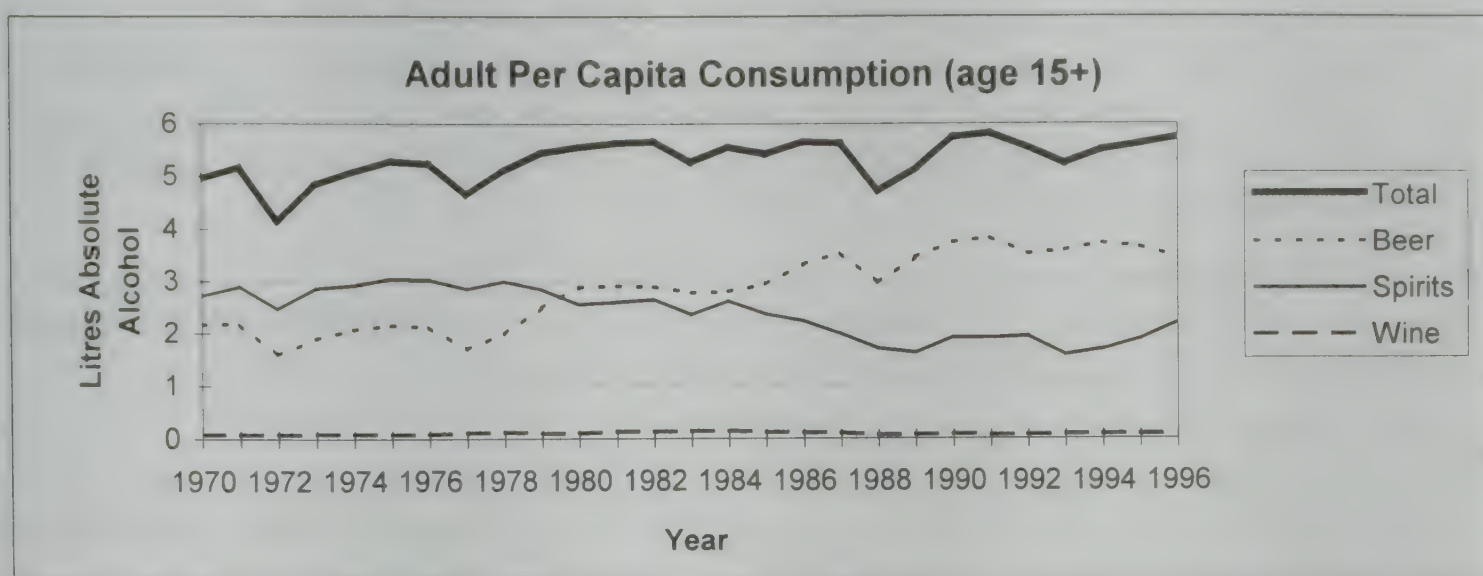
Average distribution of labour force by sector, 1990-1992 : agriculture 27%; industry 14%; services 59%

Adult literacy rate (per cent), 1995 : total 91; male 91; female 90

Alcohol production, trade and industry

Panama produces beer, distilled spirits and a small amount of wine. In 1994, it was the world’s fifth largest importer of beer from the United States.

Alcohol consumption and prevalence



Consumption

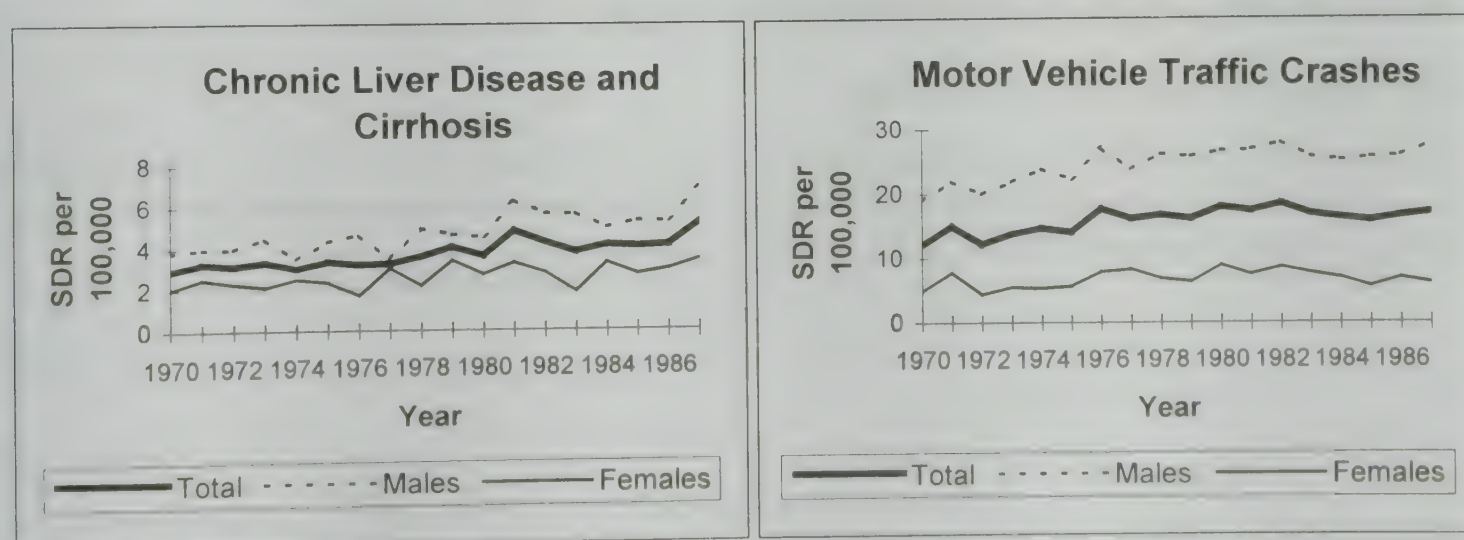
Beer has surpassed distilled spirits as the alcoholic beverage of choice, at least in terms of recorded consumption. It is known that certain alcoholic beverages are home-made in rural areas but there are no official figures available regarding the quantity of production of these beverages.

Prevalence

No national surveys have been carried out. A 1991 study interviewed 1026 people between the ages of 12 and 45 years in households in Panama City, San Miguelito and Colon, urban areas that have within their bounds approximately one-third of the total population of the country. Seventy-nine per cent of all respondents had used alcohol at some time in their lives and 38 per cent were current users (in the last 30 days). Thirty-day prevalence as a per cent of lifetime prevalence was very high (48 per cent) and an even higher percentage of those who used within the last 12 months were current users (71 per cent). Males had higher rates of lifetime use than females (62 per cent versus 33 per cent). Lifetime prevalence was 59.9 per cent for the 12 to 14 age group, 79.5 per cent for the 15 to 19 age group, 84.4 per cent for the 20 to 24 age group, 79.9 per cent for the 25 to 29 age group, 82.7 per cent for the 30 to 34 age group, 78.9 per cent for the 35 to 39 age group, and 80.4 per cent for the 40 to 45 age group. Alcohol use tended to increase with the level of education.

In a 1991 random sampling of 911 urban residents between the ages of 12 and 45, 79.4 per cent had used alcohol at some time in their lives (89 per cent of men and 70 per cent of women). Close to 38 per cent had used alcohol in the last 30 days (52 per cent of men and 22 per cent of women). Men in their twenties had the highest prevalence of alcohol use, and both male and female prevalence rates appeared to peak between the age of 20 and 30, with a dramatic increase around age 14.

Mortality, morbidity, health and social problems from alcohol use



Social Problems

During 1984-1985, alcohol was found in the blood in 8.7 per cent of motor vehicle traffic crashes.

Alcohol policies

Control of alcohol products

The manufacture, marketing and distribution of psychoactive substances is controlled by the government. There is legislation to regulate production, alcohol content, quality control, and wholesale distribution. Advertisements may not show individuals drinking liquor. Legislation exists on alcohol content and quality control.

Control of alcohol problems

The minimum legal drinking age is 18. Health professionals receive some training in the treatment of alcohol-related problems in universities at the undergraduate level.

Alcohol data collection, research and treatment

The government health systems are responsible for treatment. Almost all regions have specialized mental health teams that treat drug problems, including alcohol dependence. Efforts are being made to coordinate the initiatives of various working groups. The National Psychiatric Hospital has specific programmes on alcohol. Approximately 5 to 10 per cent of its 1000 beds are used annually for addicts. The Social Security Fund's psychiatric ward also treats addicts, and there are Alcoholics Anonymous groups as well.

Paraguay

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 136 000	4 317 000	4 960 000
Adult (15+)	1 824 000	2 557 000	2 961 000
% Urban	41.7	48.8	52.7
% Rural	58.3	51.2	47.3

Health status

Life expectancy at birth, 1990-1995 : 68.1 (males), 71.9 (females)
Infant mortality rate in 1990-1995 : 38 per 1000 live births

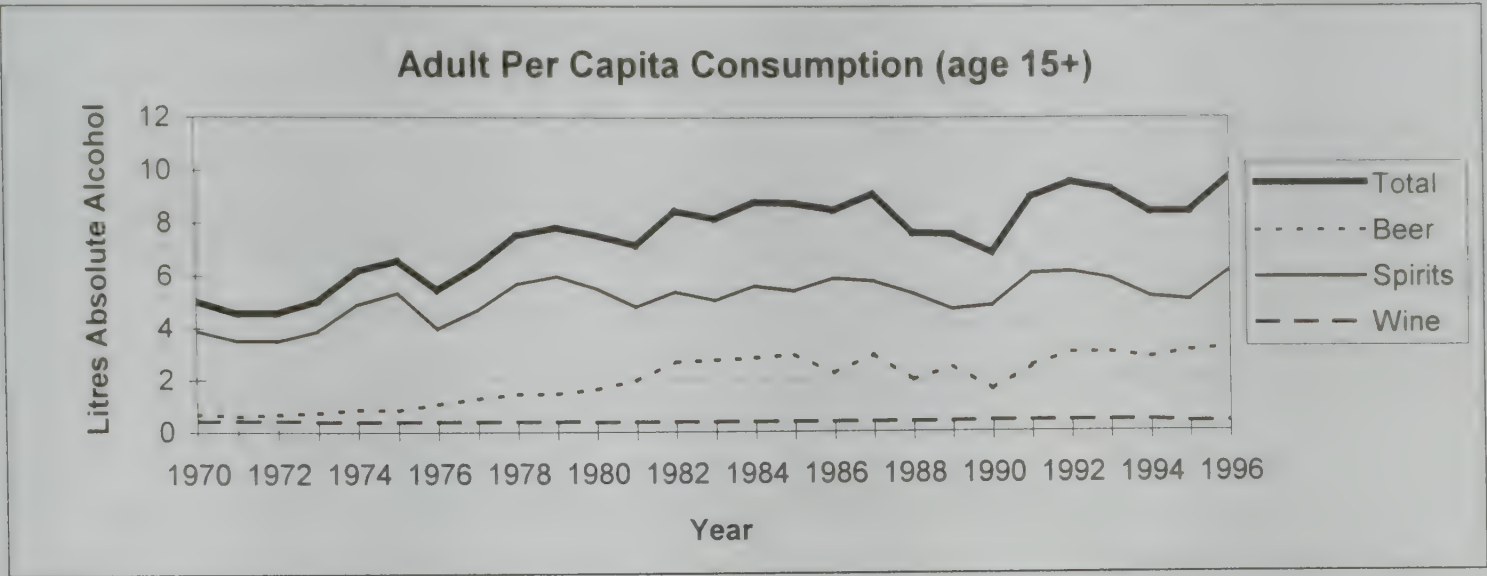
Socioeconomic situation

GNP per capita (US\$), 1995: 1690, PPP estimates of GNP per capita (current int'l \$), 1995: 3650.
Average distribution of labour force by sector, 1990-1992 : agriculture 48%; industry 21%; services 31%
Adult literacy rate (per cent), 1995 : total 92; male 93; female 91

Alcohol production, trade and industry

Paraguay produces beer, distilled spirits and wine. Domestic beer production has grown steadily over the past two decades. Imports of beer more than tripled between 1993 and 1994, and imports from a single manufacturer, Anheuser-Busch, grew 77 per cent in 1995.

Alcohol consumption and prevalence



Consumption

Spirits consumption fluctuated, but has generally increased since the 1970s. Coupled with increased consumption of beer this fuelled a rise in overall adult per capita alcohol consumption. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Prevalence

A 1991 study interviewed 2485 people between the ages of 12 and 45 who were living in private homes in the larger urban areas of the country. The prevalence of alcohol use was 79.5 per cent, (88 per cent of men and 75 per cent of women), while abuse (more than 100 grams of absolute alcohol at one sitting) affected 35.6 per cent of the sample population.

Mortality, morbidity, health and social problems from alcohol use

Health problems

A hospital-based case-control study of 131 cases of oesophageal cancer and 381 controls was carried out through the use of a questionnaire in four hospitals and all private clinics in the capital city of Asuncion between January, 1988 and March, 1991. Stopping the consumption of distilled spirits clearly reduced the risk of oesophageal cancer. The risk ratio of long-term to short-term quitting was about three, although even those who quit for greater than 15 years still had four times the risk of those who never drank at all. The study found no effect for beer or wine, which were less frequently consumed in the population studied.

Peru

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	17,321,000	21,588,000	23,780,000
Adult (15+)	10,066,000	13,441,000	15,431,000
% Urban	64.6	69.8	72.2
% Rural	35.4	30.2	27.8

Health status

Life expectancy at birth, 1990-1995 : 64.1 (males), 68.0 (females)
Infant mortality rate in 1990-1995 : 64 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2310, PPP estimates of GNP per capita (current int'l \$), 1995: 3770.

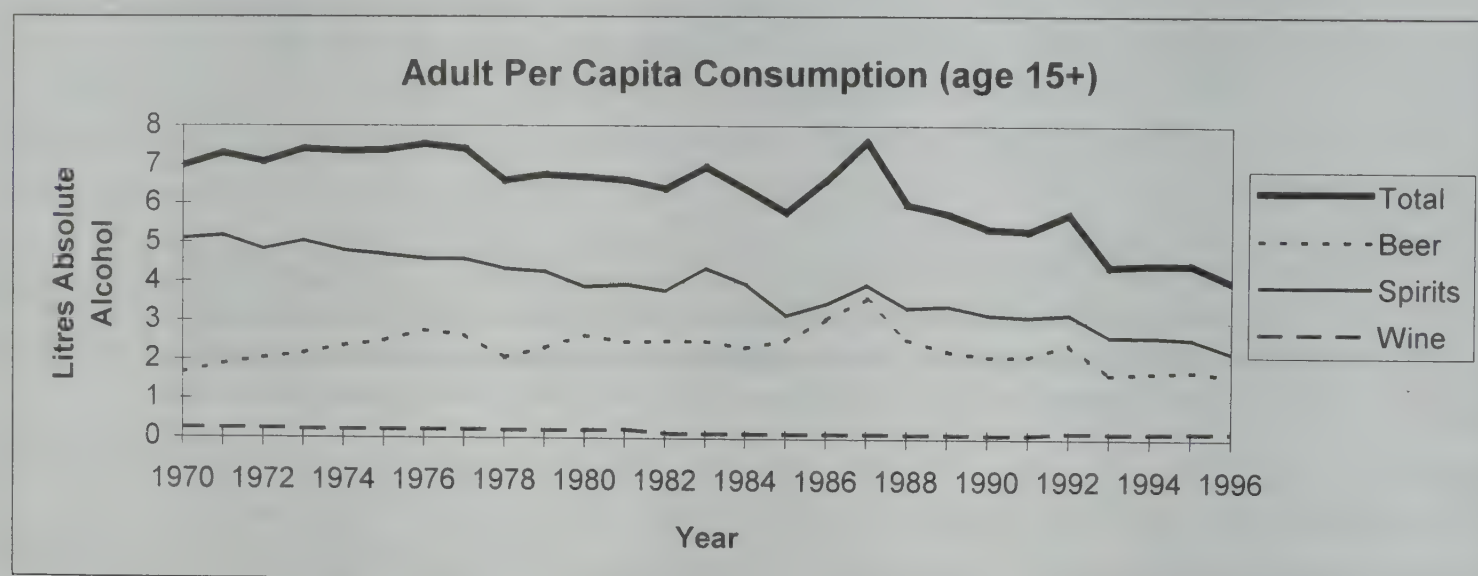
Average distribution of labour force by sector, 1990-1992 : agriculture 35%; industry 12%; services 53%

Adult literacy rate (per cent), 1995 : total 89; male 94; female 83

Alcohol production, trade and industry

Peru produces beer, distilled spirits and wine. The Backus Corporation is Peru's largest privately-owned enterprise. Backus owns three breweries, which are being consolidated into the Union de Cervecerías Peruanas Backus y Johnston S.A.

Alcohol consumption and prevalence



Consumption

According to figures procured from local industry sources, in 1994, Peruvians consumed in absolute alcohol per person above age 14: 2.48 litres of beer, 0.4 litres of wine, 1.42 litres of *chicha* (a local fermented beverage made from purple corn with an alcohol content of approximately 10 per cent), 1.36 litres of distilled spirits. Total consumption according to this estimate was 5.66 litres of absolute alcohol per person aged 15 or above.

Prevalence

A 1992 survey of a representative sample drawn from the country's 15 largest cities interviewed 1794 people between the ages of 12 and 50. The most common alcoholic drink was beer, consumed by 74 per cent of the sample, followed by wine/champagne/whisky, consumed by 9.5 per cent. Ninety-two per cent had used alcohol in their lives, while 82.9 per cent had used it in the past year. Use of alcohol rose with income. Nearly 60 per cent never drank to intoxication, while 25.2 per cent said they had tried to stop drinking in the past month and nearly nine per cent had tried five times or more.

In a 1986 survey of a random sample of 5000 urban residents between the ages of 12 and 45, 87 per cent had used alcohol at some time in their lives (90 per cent of men and 82 per cent of women), and 45 per cent had used alcohol in the past 30 days (55 per cent of men and 32 per cent of women). For both genders, the prevalence of alcohol use increased with age.

A 1986 national household survey carried out in Lima and the provinces with a sample of 7425 persons found that 87.2 per cent used alcohol at least once, and 34.8 per cent used it in the last year. Beer was the most commonly used alcoholic beverage, drunk by 54 per cent of the sample, while wine was the second most common, drunk by 11.4 per cent.

Age patterns

In the 1992 survey, of those aged 12 to 19 years, 79.6 had used alcohol. More than 60 per cent of those aged 12 to 14 years had begun drinking between the ages of 5 and 11. In the 1986 survey, 54.6 per cent of those aged 14 to 16 years had tried alcohol, while 81.3 per cent of 15 to 18 year-olds had drunk alcohol.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Although there are no statistics available for the country as a whole, a study of 2000 patients visiting a single outpatient clinic in 1987 found that 12 per cent were alcohol dependent. In 1993, lifetime prevalence rates of alcohol dependence and related DSM-III diagnoses were determined for a population sample of 815 people from the Independencia district of Lima, using interviews based on a revised form of the Spanish translation of the DIS (Diagnostic Interview Schedule). The prevalence of alcohol abuse or dependence was higher among the men (34.8 per cent) than among the women (2.5 per cent), but the onset for women was earlier. Alcohol dependence was strongly associated with antisocial personality disorder and with drug abuse or dependence.

Mortality

Between 1980 and 1992, alcohol-related motor vehicle crashes averaged 8.1 per cent of total motor vehicle crashes. Between 1985 and 1992, four per cent of motor vehicle deaths were caused by drunk drivers, and 14 per cent were caused by drunk pedestrians.

Social problems

Alcohol as a "social problem" contributes to an average of 45 000 police interventions per year. Between 1974 and 1981, the Ethilic Dosage Service in the city of Cusco measured the blood alcohol of all those taken for traffic infractions. Approximately 35 per cent showed positive blood alcohol, with 27 per cent of the total having blood alcohol exceeding 0.10 g%.

Alcohol policies

Control of alcohol problems

The minimum legal drinking age is 18. Driving under the influence of alcohol is considered a misdemeanor. "Ordinary drunk driving," defined as blood alcohol concentration exceeding 0.06 g% but less than 0.10 g%, carries a fine of between 20 and 40 per cent of the minimum salary per month established by the Labour Authority. "Gross drunk driving," with blood alcohol concentration of 0.10 g% or above, receives a fine of between 60 and 100 per cent of the minimum monthly salary. A second offence committed within a year of the first carries a fine of double the first amount and, in the case of gross drunk driving, removal of licence for three to six months. The second repeat offence within 12 months receives double the sanctions of the first repeat offence. The third repeat offence within 12 months carries double the fine of the second and permanent licence revocation.

There is no governmental institution in charge of prevention, and preventive activities are not organized. Little instruction on drug abuse is provided at the undergraduate level, and there is no specialization in drug abuse. Some multidisciplinary courses have been organized.

Alcohol data collection, research and treatment

Treatment is financed by the government and Social Security. The National Institute of Mental Health coordinates activities, and care is provided by health services. There are various community organizations that provide help, including Alcoholics Anonymous.

Puerto Rico

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	N/A	3,717
Adult (15+)	2 187 000	2 568 000	2 768 000
% Urban	N/A	N/A	N/A
% Rural	N/A	N/A	N/A

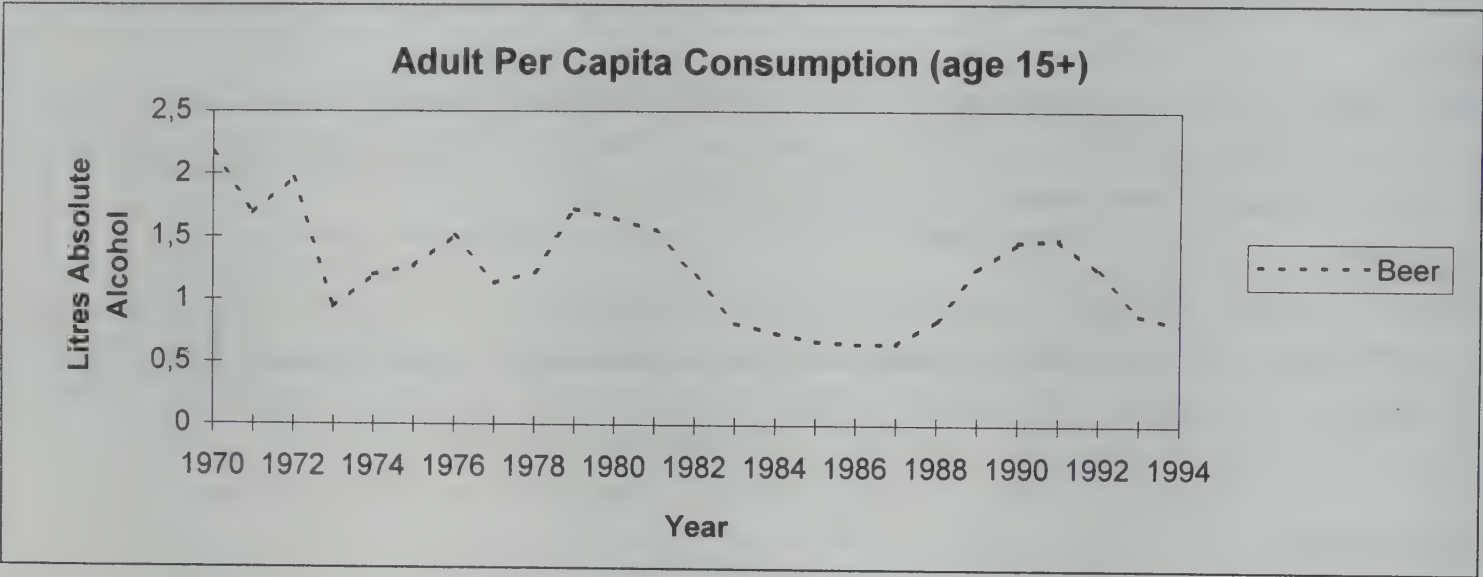
Health status

Life expectancy at birth, 1990-1995 : 75

Alcohol production, trade and industry

Cerveceria India brews the island's leading local beer, Medalla, which had between 12 and 15 per cent of the local market in 1995, behind the brands Budweiser and Coors. The Island also houses a Bacardi factory as well as other rum producers.

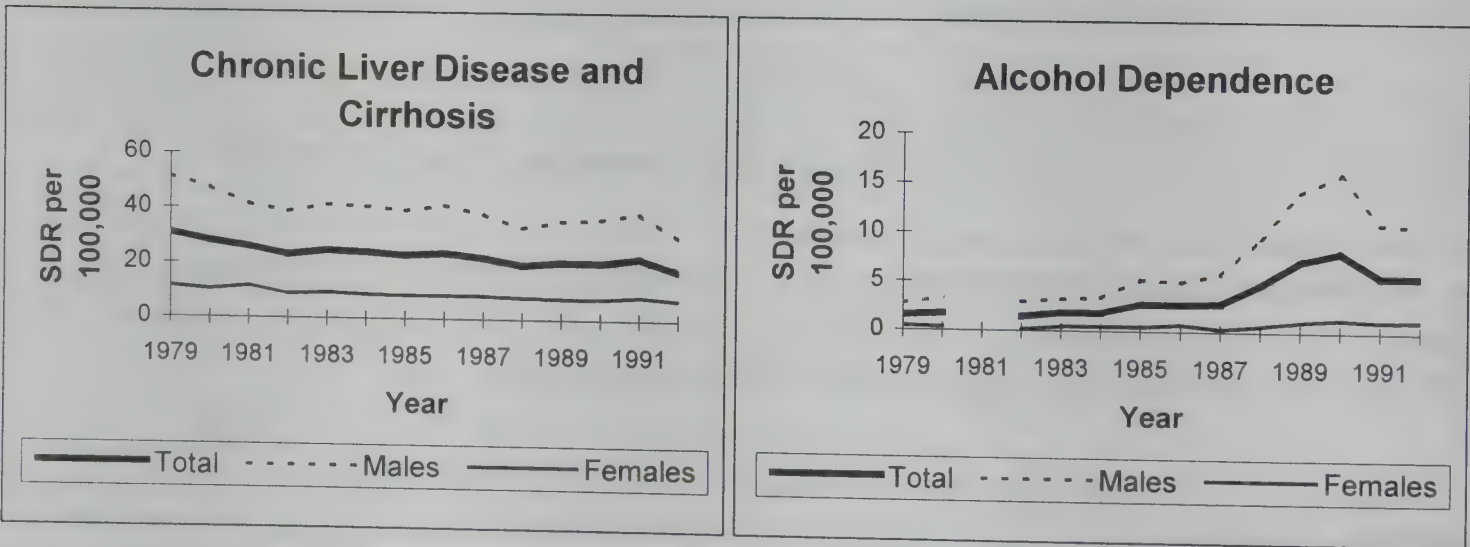
Alcohol consumption and prevalence



Consumption

The chart above is deceptive on two counts: first, there is no information available on spirits production or exports, so it is impossible to estimate the considerable spirits consumption on this rum-producing island; second, there is no import information for beer, and since the two leading beer brands are both imports, beer consumption is greatly underestimated. Also, there is no information available of any kind regarding wine consumption.

Mortality, morbidity, health and social problems from alcohol use



Mortality

The rate of death from chronic liver disease and cirrhosis decreased slightly between 1970 and 1992, while the rate of death from alcohol dependence increased sharply in the late 1980s, particularly for men.

Suriname

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	355 000	400 000	423 000
Adult (15+)	213 000	259 000	273 000
% Urban	44.8	47.5	50.4
% Rural	55.2	52.5	49.6

Health status

Life expectancy at birth, 1990-1995 : 67.8 (males), 72.8 (females)

Infant mortality rate in 1990-1995 : 28 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 880, PPP estimates of GNP per capita (current int'l \$), 1995: 2250.

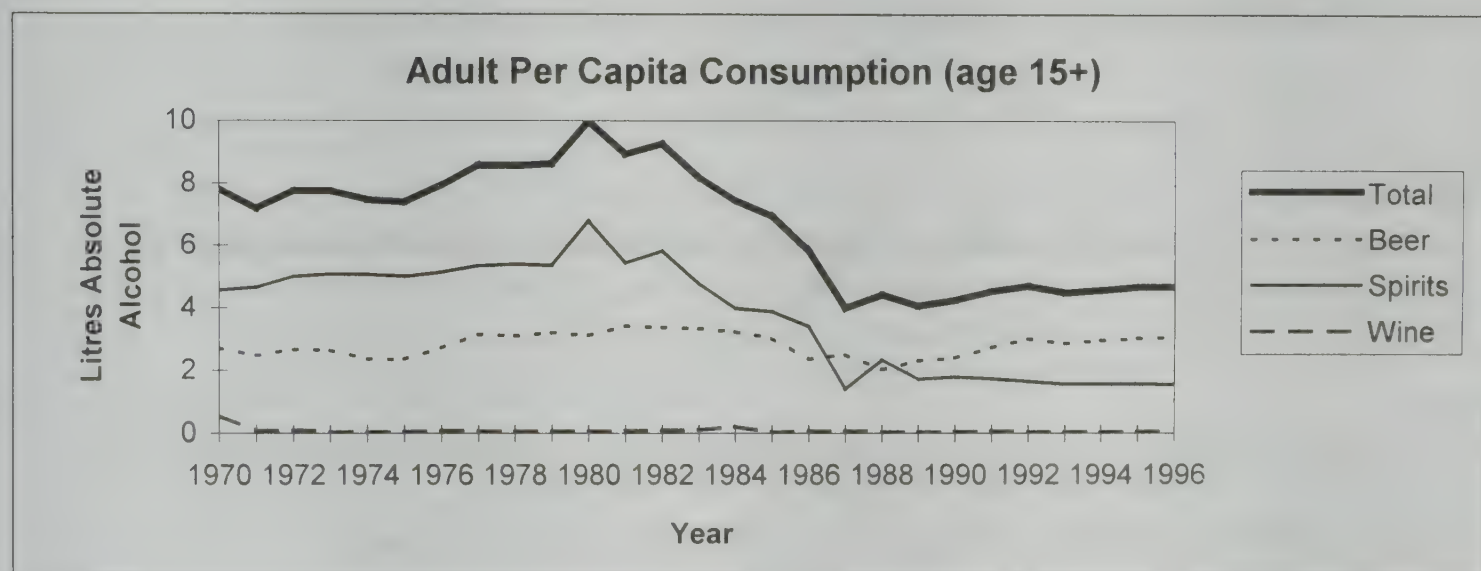
Average distribution of labour force by sector, 1990-1992 : agriculture 20%; industry 20%; services 60%

Adult literacy rate (per cent), 1992 : total 96; male 96; female 96

Alcohol production, trade and industry

Suriname produces beer, and imports distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

Beer and spirits are the alcoholic beverages of choice, according to recorded production and trade figures. There are no data available on consumption of smuggled or informally- or home-produced alcoholic beverages.

Trinidad and Tobago

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 082 000	1 236 000	1 306 000
Adult (15+)	708 000	816 000	885 000
% Urban	63.1	69.1	71.8
% Rural	36.9	30.9	28.2

Health status

Life expectancy at birth, 1990-1995 : 69.3 (males), 74.0 (females)
Infant mortality rate in 1990-1995 : 18 per 1000 live births

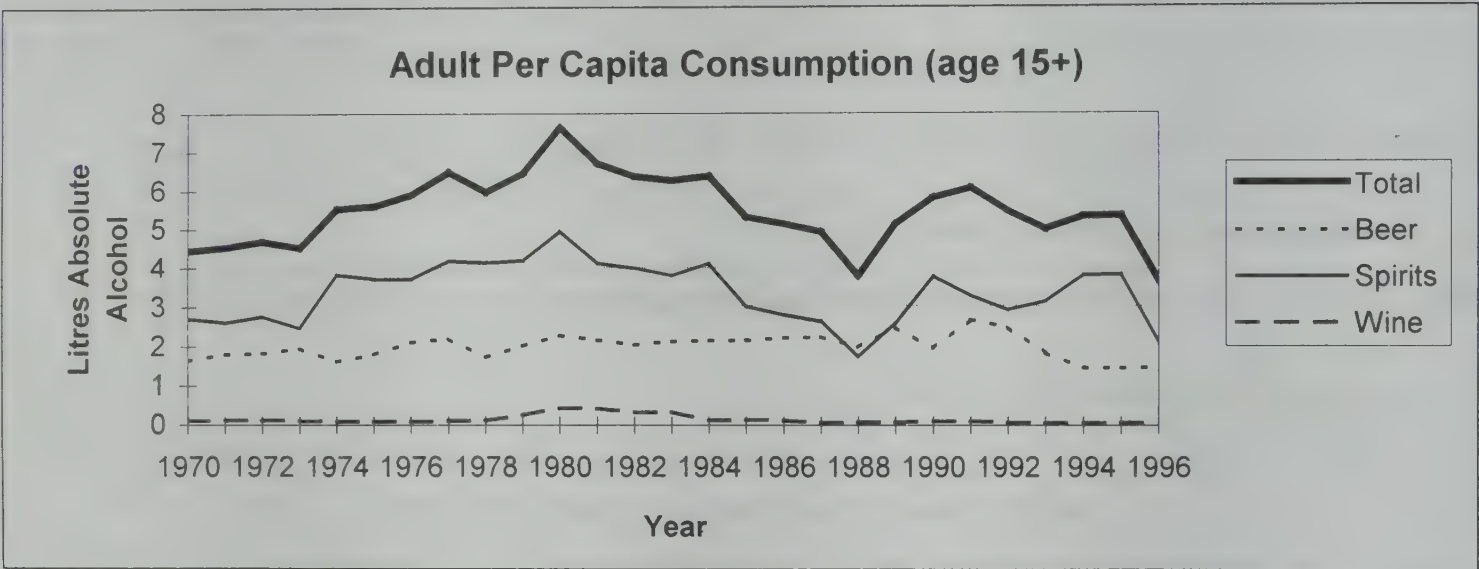
Socioeconomic situation

GNP per capita (US\$), 1995: 3770, PPP estimates of GNP per capita (current int'l \$), 1995: 8610.
Average distribution of labour force by sector, 1990-1992 : agriculture 10%; industry 33%; services 57%
Adult literacy rate (per cent), 1995 : total 98; male 99; female 97

Alcohol production, trade and industry

Trinidad and Tobago produce beer and distilled spirits, and import small amounts of wine.

Alcohol consumption and prevalence



Consumption

Distilled spirits is the alcoholic beverage of choice, and its fluctuations have determined the shape of recorded adult per capita alcohol consumption. There is no information available regarding consumption of smuggled or home-brewed or informally produced alcohol.

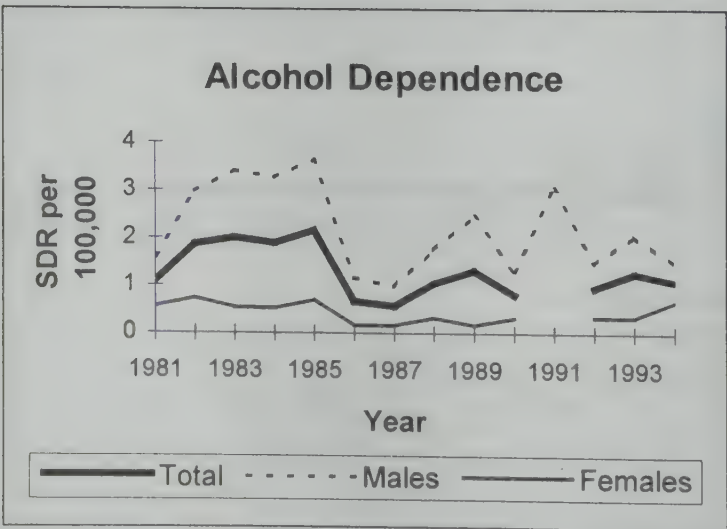
Prevalence

A school survey conducted in 1985 showed that 91 per cent of students had used alcohol.

Mortality, morbidity, health and social problems from alcohol use

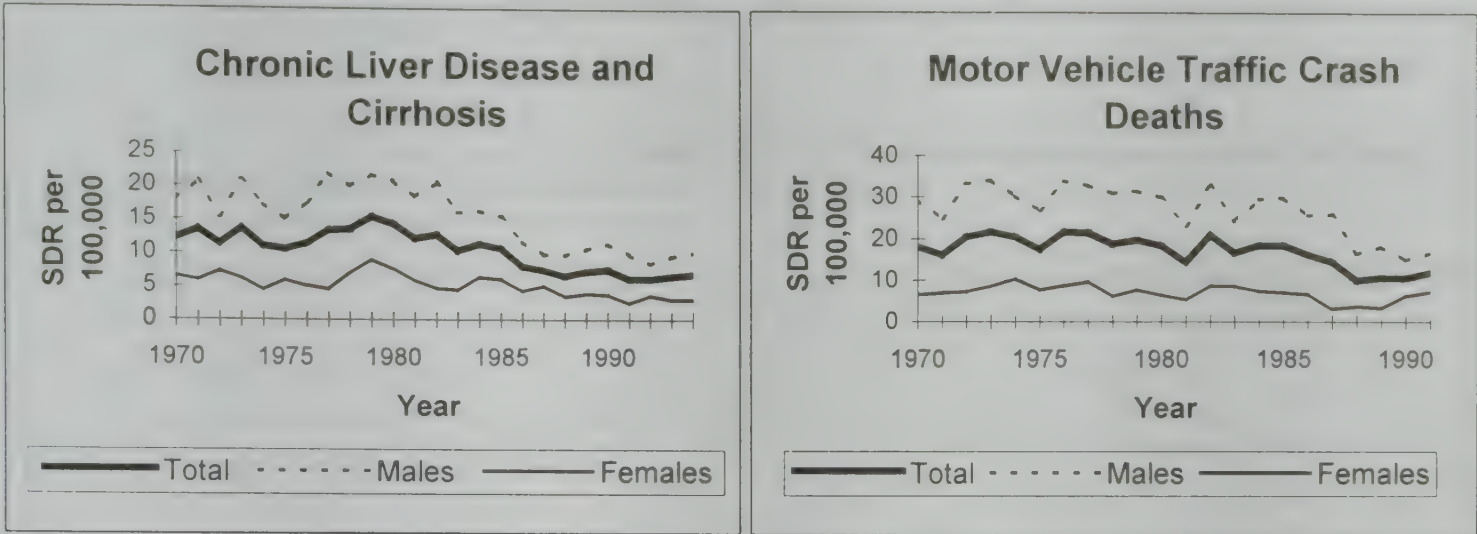
Alcohol dependence and related disorders

The SDR per 100 000 population from alcohol dependence was 1.1 in 1994, nearly the same level reported in 1981.



Mortality

The SDR from chronic liver disease and cirrhosis has fallen steadily from a high point in 1979 of 15.4 to its 1994 level of 6.7 per 100 000 population.



Morbidity

According to data from the largest general hospital, 55 per cent of the drivers treated for injuries from motor vehicle crashes in 1979 presented BAC of 0.08 g% or greater.

Health problems

The total number of people treated for alcohol-related problems in psychiatric hospitals rose from 697 in 1985 to 835 in 1987.

Alcohol policies

Control of alcohol products

There is some regulation of places where alcohol may be sold.

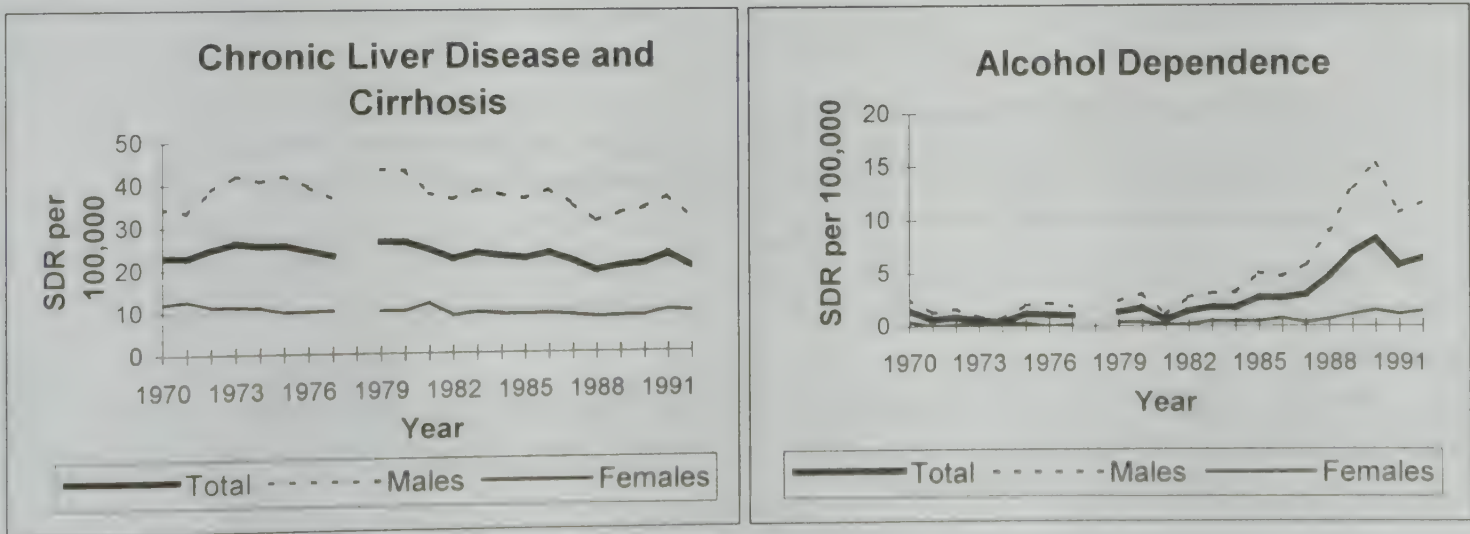
Control of alcohol problems

The minimum legal age for alcohol consumption is 16 years. A Council on Alcohol and Drug Abuse has been established to coordinate and supervise programmes for drug abuse control. The major centres of higher education participate in training related to drug abuse. In medical courses, this topic is approached in psychiatry courses.

Alcohol data collection, research and treatment

Most patients seeking treatment for alcohol-related problems enter the psychiatric hospital. There is a specialized 29-bed centre for the treatment of alcoholic patients, and there are treatment and rehabilitation centres run by Alcoholics Anonymous throughout the country. Some companies have programmes to assist employees with alcohol-related problems.

Mortality, morbidity, health and social problems from alcohol use



Mortality

The rate of death from chronic liver disease and cirrhosis decreased slightly between 1970 and 1992, while the rate of death from alcohol dependence increased sharply in the late 1980s, particularly for men.

United States of America (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	227 757 000	249 924 000	263 250 000
Adult (15+)	176 454 000	195 685 000	205 210 000
% Urban	73.7	75.2	76.2
% Rural	26.3	24.8	23.8

Health status

Life expectancy at birth, 1990-1995 : 72.5 (males), 79.3 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

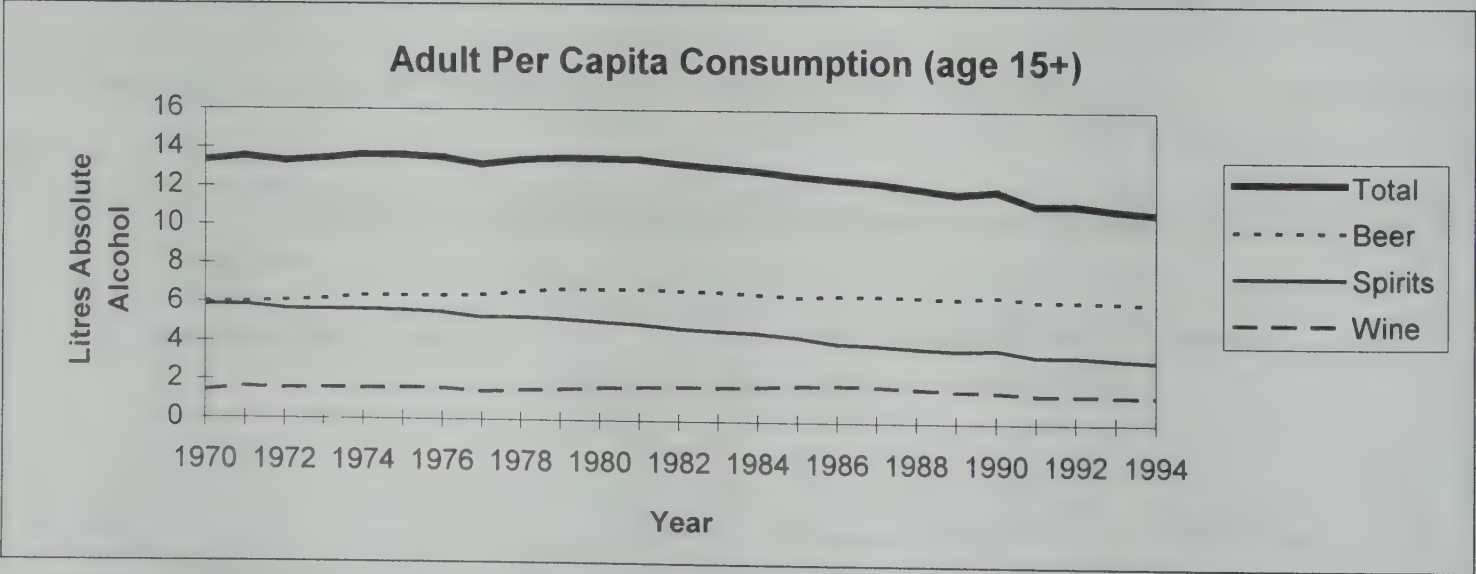
Socioeconomic situation

GNP per capita (US\$), 1995: 26 980, PPP estimates of GNP per capita (current int'l \$), 1995: 26 980. Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 25%; services 72%

Alcohol production, trade and industry

The United States (US) is the world's largest beer market, and home to some of the world's largest brewing companies, including global leader Anheuser-Busch. In 1995, the top five companies accounted for 91 per cent of domestic production. The speciality beer market is highly fragmented with more than 800 micro-brewers. The US is also the world's largest importer of beer and spirits. The world's largest wine maker, E. & J. Gallo, is located in the US along with two of the world's largest spirits producers, both of which primarily produce whisky.

Alcohol consumption and prevalence



Consumption

Alcohol consumption has been falling steadily in the United States since 1980, primarily due to a decline in consumption of distilled spirits. Beer and wine consumption both increased slightly in the 1980s, but have reverted to their 1970 levels.

Prevalence

According to the 1996 national household survey of a multistage area probability sample of 18 269 persons aged 12 years or older approximately 51 per cent had used alcohol in the past month, about 15.5 per cent engaged in binge drinking (five or more drinks on at least one occasion in the past month, and about 5.4 per cent were heavy drinkers (drinking five or more drinks per occasion on five or more days in the past 30 days). About 59 per cent of men were past month alcohol users, compared with 44 per cent of women. Men were much more likely than women to be binge drinkers (22.8 per cent and 8.7 per cent, respectively) and heavy drinkers (9.3 per cent and 1.9 per cent, respectively). In general, the higher the level of educational attainment, the more likely was the current use of alcohol. The 1995 national household survey measured lifetime prevalence of alcohol use at 80 per cent, use in the past year at 65 per cent, and use in the past 30 days at 52 per cent.

A 1995 report found that hazardous drinking - five or more drinks on one occasion - accounted for more than 53 per cent of all drinking in the United States. Another 25 per cent of drinking took place in a potentially hazardous fashion - three to four drinks on one occasion. The heaviest drinking 10 per cent of American adults, averaging two to four drinks per day, accounted for 60 per cent of total alcohol consumption. The heaviest drinking five per cent, averaging more than four drinks a day, accounted for 41 per cent of total consumption.

Ages patterns

Young adult (18 to 25 years old) drinkers surveyed in the 1996 national household survey were the most likely to binge or drink heavily. About half the drinkers in this age group were binge drinkers and about one in five were heavy drinkers. Among youths age 12 to 17, the rate of current alcohol use was 49.8 per cent in 1979, 32.5 per cent in 1990, 21.1 per cent in 1995, and 18.8 per cent in 1996.

Researchers at the University of Michigan annually measure alcohol and other drug use among a random sample of the nation's young people (grades 8, 10 and 12 and college). In 1995, 55 per cent of 8th graders, 71 per cent of 10th graders, 81 per cent of 12th graders and 90 per cent of college students had tried alcohol. In 1995, lifetime prevalence of alcohol use for high school seniors was 80.7 per cent (80.9 per cent for males and 80.1 per cent for females). Annual prevalence was 73.7 per cent (74.5 per cent for males and 72.7 per cent for females), and 30-day prevalence was 51.3 per cent (55.7 per cent for males and 47.0 per cent for females). Daily prevalence (daily use in the past thirty days) was 3.5 per cent (5.5 per cent for males and 1.6 per cent for females). In 1995, 15 per cent of 8th-graders, 25 per cent of 10th-graders and 31 per cent of 12th-graders reported binge drinking (having five or more drinks in a row on at least one occasion in the prior two weeks), a slight increase from the early 1990s.

There is a substantial sex difference among high school seniors and college students in the prevalence of occasions of heavy drinking, defined as five or more drinks on one occasion. The rates for high school seniors are 23 per cent for females versus 37 per cent for males in 1995; for college males, 35 per cent for females and 47 per cent for males. College men also have much higher rates of daily drinking than college women (5.3 per cent versus 1.8 per cent in 1995).

Alcohol use among population subgroups

In the 1996 national household survey, Whites continued to have the highest rate of alcohol use in the past 30 days (54 per cent). Rates for Hispanics and Blacks were 43 per cent and 42 per cent, respectively. The rate of binge use was lower among Blacks (13.1 per cent) than among Whites (16.1 per cent) and Hispanics (16.7 per cent). Heavy use showed no statistically significant differences by race/ethnicity (5.5 per cent for Whites, 6.2 per cent for Hispanics, and 5.3 per cent for Blacks).

Economic impact of alcohol

People in the United States spent US\$ 90 billion on alcoholic beverages in 1995, 56 per cent of the total amount spent on beverages.

In 1992, alcohol abuse, alcohol dependence and related disorders cost an estimated US\$ 148 billion. Adjusting for inflation and population changes yields an estimate of US\$ 166.5 billion for 1995. This includes US\$ 22.5 billion for health care expenditures, US\$ 119.3 billion for productivity losses, and US\$ 24.7 billion for other losses, including traffic crashes, fires, and criminal justice costs.

Federal tax and customs duty from alcohol totalled US\$ 7.5 billion in 1995: US\$ 3.6 billion for distilled spirits, US\$ 3.3 billion for beer, and US\$ 587 million for wine. This amounts to slightly more than one-half of one per cent of total federal government revenues. Individual states collected an additional US\$ 3.6 billion in revenues from taxes dedicated to alcoholic beverages, approximately four-tenths of one per cent of total state revenues.

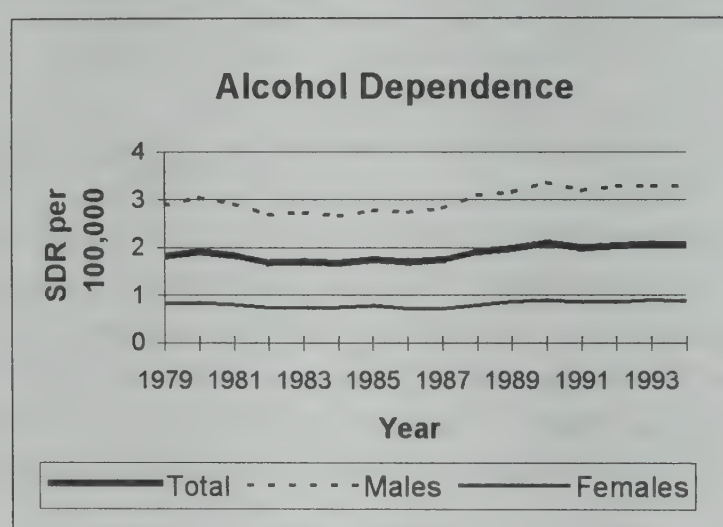
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In a 1994 national probability sample of 8098 respondents 15 to 54 years old, 7.2 per cent of the sample met the criteria for a diagnosis of alcohol dependence, and an additional 2.5 per cent met the criteria for alcohol abuse without dependence.

A 1992 study used a large multistage design to draw a national sample of 42 861 respondents 18 years of age or older, over-sampling Blacks and young adults (18 to 29 years old). The combined prevalence rate of alcohol abuse or alcohol dependence was 7.4 per cent. This prevalence rate is higher than the six per cent reported in 1988.

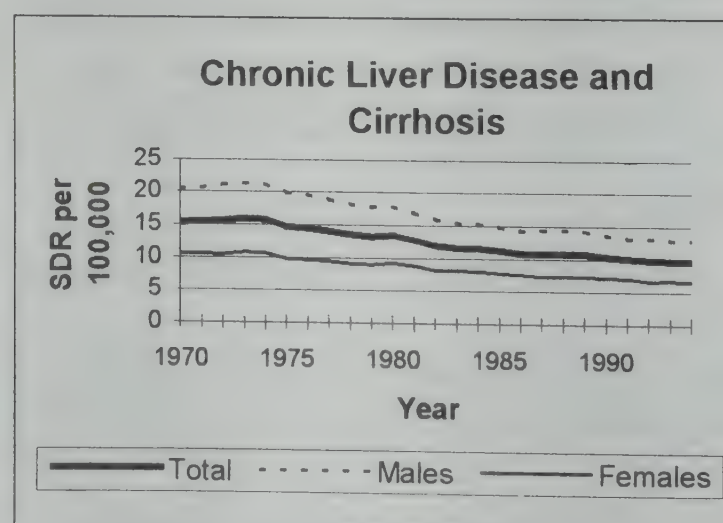
According to an analysis of demographic, clinical, and treatment episode characteristics of 3087 American Indian veterans discharged from Department of Veterans Affairs hospitals in fiscal year 1991, 46.3 per cent of discharged American Indian veterans had substance use disorders, compared with 23.4 per cent of discharged veterans overall. More than 97 per cent of American Indian substance use diagnoses were for alcohol dependence, while rates of other drug use disorders were low. Substance dependent American Indians were younger, and more likely to be male and unmarried, than non-dependent American Indians.

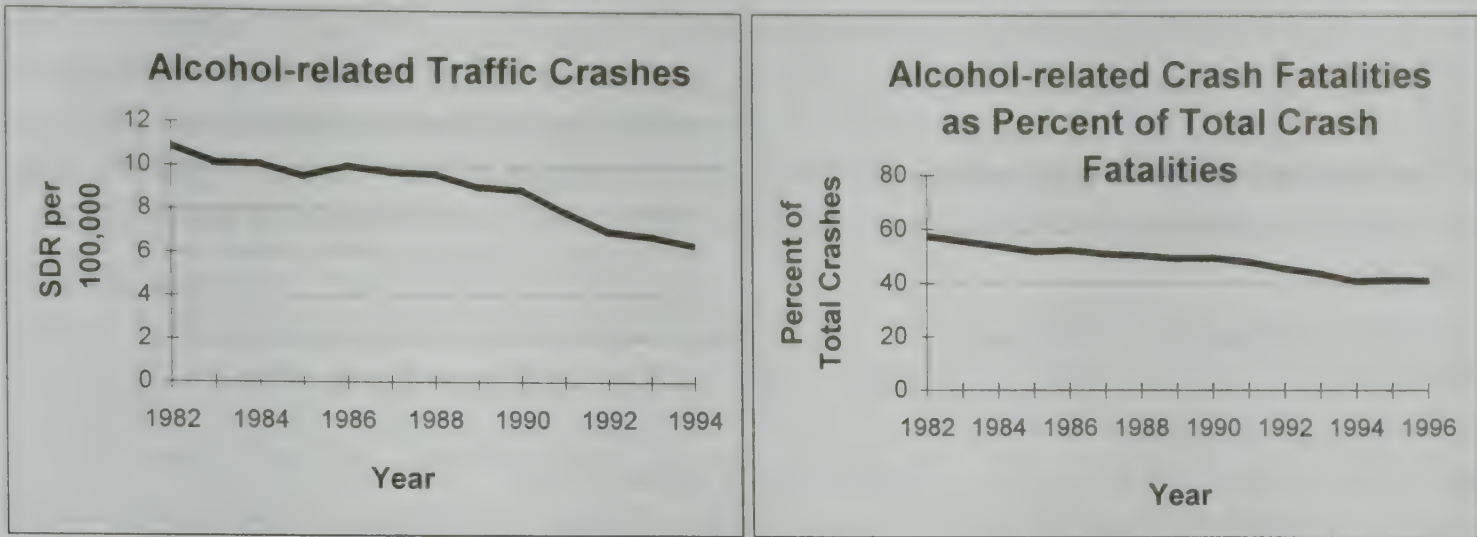


Mortality

In 1995 alcohol contributed more than 100 000 deaths annually, making it the fourth leading cause of death. The number of deaths attributable to alcohol problems in 1992 was estimated in a 1998 report at 107 400.

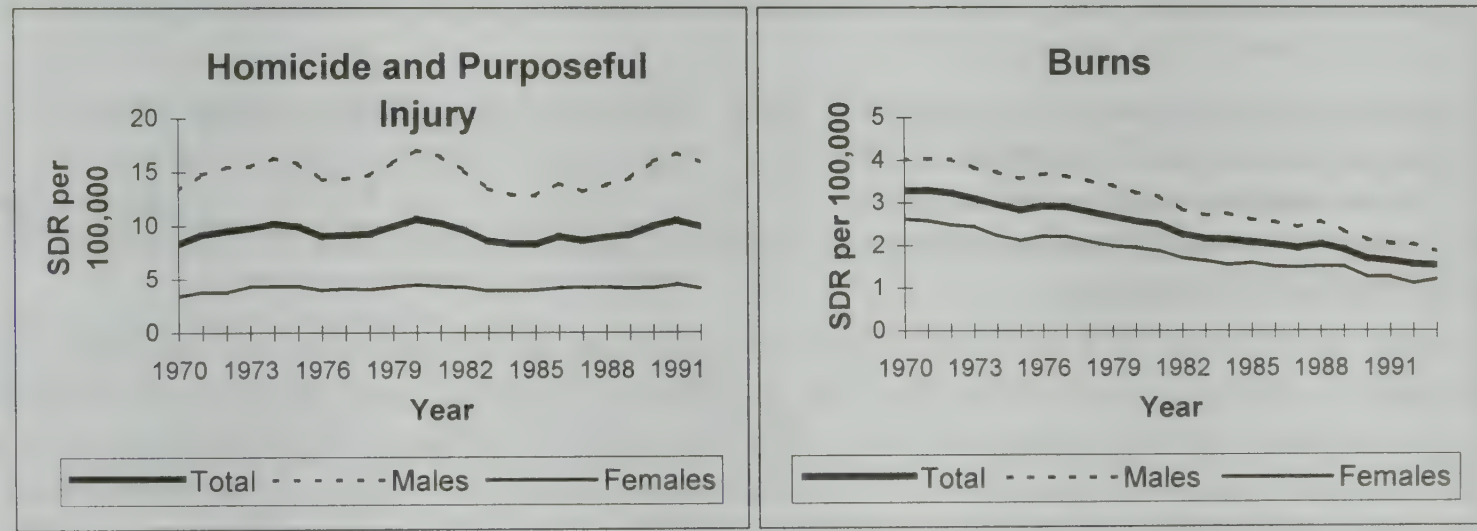
In 1996, 17 196 persons were killed in alcohol-related motor vehicle crashes, 40.9 per cent of total motor vehicle crash deaths. Of these, 3732 had BAC measuring between 0.01g% and 0.09 g%, and 13 395 had BAC of 0.10 g% or higher.





A 1994 study compared drinking patterns of 6355 persons aged 25 to 64 years who died as a result of either injury or disease. The study showed that those who died of injury drank more frequently and more heavily than those who died of disease. Daily drinking, binge drinking and heavy drinking increased the likelihood of injury as the underlying cause of death.

Between 24 and 35 per cent of suicides in 1993 had positive BACs at the time of death. In a review of 15 studies investigating the drinking patterns of homicide offenders in the early 1990s, it was found that, in most of the studies, more than 60 per cent of homicide offenders were drinking at the time of the offence. Another study found that one-half to two-thirds of homicides and serious assaults, alcohol is present in the offender, the victim or both. Alcohol use has also been implicated in 33 to 61 per cent of burn fatalities. Between 17 and 53 per cent of fatal falls are alcohol-related, and alcohol is involved in approximately one-third of all drowning and boating deaths.



Morbidity

In 1996, 321 000 persons were injured in alcohol-related motor vehicle crashes, nine per cent of all those injured in motor vehicle crashes.

A 1993 study found that of 2657 patients admitted to a hospital emergency room for treatment of blunt or penetrating trauma, 47 per cent had a positive BAC (0.01 g% or greater) and about 36 per cent were intoxicated (BAC of 0.10 g% or greater). Intoxicated patients were more likely to be in the 25 to 34 year old age group, and to be male and non-white, and the highest proportion of intoxicated patients was found among victims of stab wounds.

A 1994 study of a representative sample of 29 192 working adults estimated that the odds of occupational injury increased with the frequency of heavy drinking, with odds ratios varying from 1.08 (one occasion of heavy drinking) to 1.74 (daily heavy drinking) after adjusting for the effects of age, gender, education, occupation, and strenuous job activity.

Social problems

In a 1994 study of college campus date rapes, 53 per cent of offenders and 43 per cent of victims had been drinking. A 1992 study found that more than 25 per cent of offenders used alcohol immediately preceding a rape.

It was estimated in 1993 that alcohol contributes to 60 to 70 per cent of domestic violence. In a 1991 study of 450 accounts of the most recent violent episodes reported by community residents, 20 per cent involved marital abuse. Of these marital incidents, 44 per cent of assailants and 14 per cent of victims had been drinking. While research findings vary widely, it is clear that problem drinking often contributes to child abuse (22 to 63 per cent of cases), and sexual molestation and incest (30 to 71 per cent of cases).

Alcohol policies

Control of alcohol products

The federal excise tax rate per gallon is US\$ 0.58 on beer, US\$ 1.07 on table wine and US\$ 13.50 on spirits. States also apply their own alcohol taxes at varying levels. Small wineries receive US\$ 0.90 per wine gallon credit for the first 100 000 wine gallons removed per year, which allows them to retain the pre-1991 federal tax rate of \$ 0.17.

States are responsible for regulating the sale and distribution of alcoholic beverages and in this regard establish types and numbers of retail outlets, advertising restrictions, days and hours of sale, etc. Two retail systems operate in the United States. In 18 states, a monopoly (or control) system exists under which the government controls the wholesale trade in alcoholic beverages and restricts the retail sale of some or all types of alcoholic beverages to government-owned stores. In the second type of system - "licence states" - all alcoholic beverages are sold by private licensees. Licence types are usually divided into two categories: on-premise consumption and off-premise consumption. Each category generally provides for licensees with the singular or combined privilege to sell beer, wine or spirits. Thirty-two states and the District of Columbia fall into this category.

Local county and city governments in many states have the choice of whether to permit or prohibit the sale of alcoholic beverages. This choice is referred to as a local option. The extent of participation by the local governments varies between states.

The Distilled Spirits Council of the United States (DISCUS), the distilled spirits industry's trade association, announced on 7 November, 1996, that it would end a long-standing voluntary ban on the advertising of distilled spirits on television and radio. There are no federal regulations banning broadcast advertising of alcoholic beverages. Numerous cities have passed full or partial bans on billboard advertising of alcohol.

The Bureau of Alcohol, Tobacco and Firearms (ATF) in the Department of the Treasury has responsibility for the regulation of the labelling, advertising, trade practices, production, importation, exportation, and taxation of beverage alcohol. ATF has reviews, but does not pre-approve, the content of alcohol advertisements to ensure that consumers are not misled or deceived, and that advertising does not include deceptive, false, or misleading statements about the product, obscene or indecent statements or representations, curative or therapeutic representations that are untrue in any particular or tend to create a misleading impression, and representations that are inconsistent with information required to appear on the label of the product.

Beginning in 1989, alcoholic beverage containers must carry the following warning label: "Government Warning: 1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. 2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery, and may cause health problems."

Control of alcohol problems

BAC levels and penalties are legislated at the state level, which in most states is 0.10 g%. The BAC level has been lowered to 0.08 g% in 15 states. All states prescribe mandatory penalties for offenders, consisting of licence suspension or revocation, fines, imprisonment and/or specified hours of community service in addition to, or in lieu of, imprisonment. Forty-five states prescribe mandatory licence suspension or revocation for second-time offenders for periods ranging from 30 days to three years. Imprisonment is mandatory in 16 states for first time offenders; in 45 states, for second time offenders; and in 44 states for third time offenders. As of September 1995, 27 states and the District of Columbia had set the BAC level at 0.02 g% or lower for drivers under the age of 21. The Presidential (now National) Commission on Drunk Driving was created in April 1982 to heighten public awareness of the seriousness of the drinking and driving problem.

The 1986 Omnibus Anti-Drug Act created the Centre for Substance Abuse Prevention in the Department of Health and Human Services, which has been active both at the community level and in national media in promoting alcohol and other drug problem prevention coalitions and messages. Thousands of local anti-drug coalitions exist at the grassroots level, and most of them work on alcohol as well as other drug problems.

Alcohol data collection, research and treatment

The National Institute on Alcohol Abuse and Alcoholism, created in 1970, is responsible for carrying out and funding research programmes on alcohol. It is required to devote 15 per cent of its research budget to health services research. The National Drug and Alcoholism Treatment Utilization Survey (NDATUS) provides data on treatment capacity, utilization rates, and staffing patterns of facilities that provide alcohol and other drug services. The National Highway Traffic Safety Administration in the US Department of Transportation publishes an annual compilation of motor vehicle crash data with detailed information on alcohol-related crashes and fatalities. The Centre for Disease Control (CDC) also collects data of various types pertaining to alcohol.

Between 1982 and 1993, there was a 147 per cent increase (from 4233 to 10 466) in the number of alcohol-only and combined alcohol and drug treatment units and a 190 per cent increase (from 283 169 to 822 298) in the number of clients served on a given day. The most current data available (1993) reported 1087 units (9.5 per cent of total units) as alcohol-only treatment facilities, 9379 (81.6 per cent) units as combined alcohol and other drug treatment facilities, and 1030 (nine per cent) units as drug-only treatment facilities. The treatment capacity for each type of facility was 136 957, 984 861, and 150 149 clients, respectively. The data showed that on a given day, 102 386 clients used alcohol-only treatment facilities, (10.8 per cent of total clients), 719 902 clients used combined alcohol and other drug treatment facilities, and 121 920 clients used drug-only facilities (12.9 per cent).

Alcoholics Anonymous is widely available in the United States, with meetings occurring in most major cities on a daily basis.

Uruguay

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 914 000	3 094 000	3 186 000
Adult (15+)	2 128 000	2 297 000	2 409 000
% Urban	85.2	88.9	90.3
% Rural	14.8	11.1	9.7

Health status

Life expectancy at birth, 1990-1995 : 69.3 (males), 75.7 (females)

Infant mortality rate in 1990-1995 : 20 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 5170, PPP estimates of GNP per capita (current int'l \$), 1995: 6630.

Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 22%; services 73%

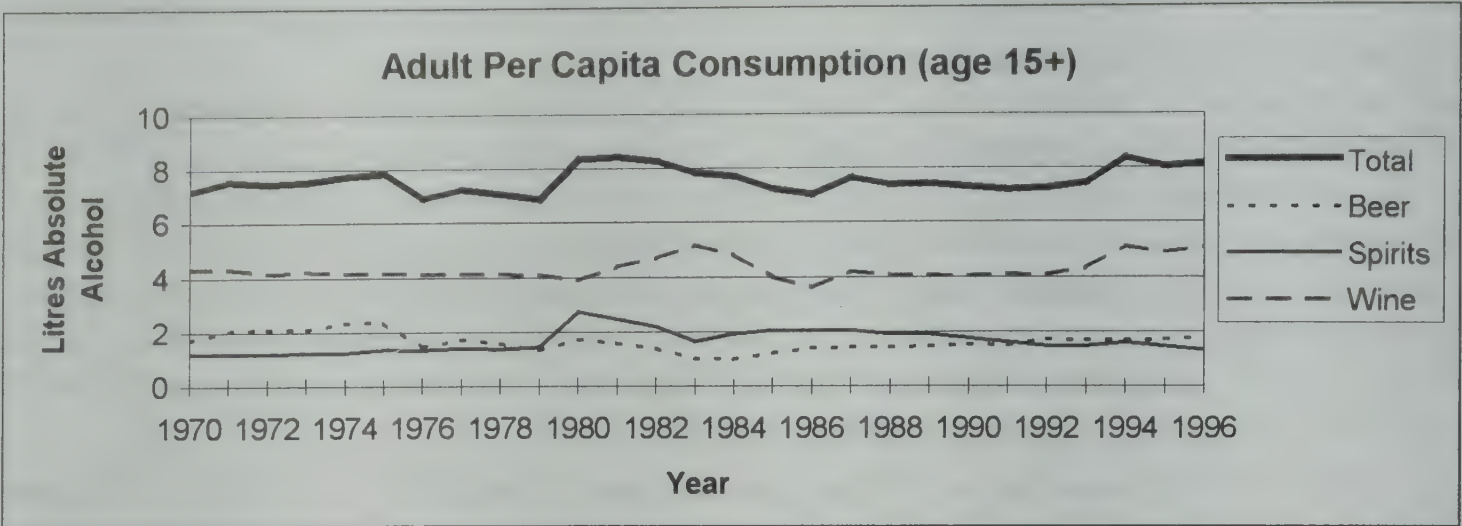
Adult literacy rate (per cent), 1995 : total 97; male 98; female 97

Alcohol production, trade and industry

Distilled spirits production is governed by the state production monopoly, the Administracion Nacional de Combustibles, Alcohol Y Portland (ANCAP). ANCAP is an autonomous organization that produces methyl and ethyl alcohol as well as distilled beverages. There are private distilleries, but

these operate under government authorization and control. Uruguay also produces beer and wine, as well as a range of local distilled and fermented beverages.

Alcohol consumption and prevalence



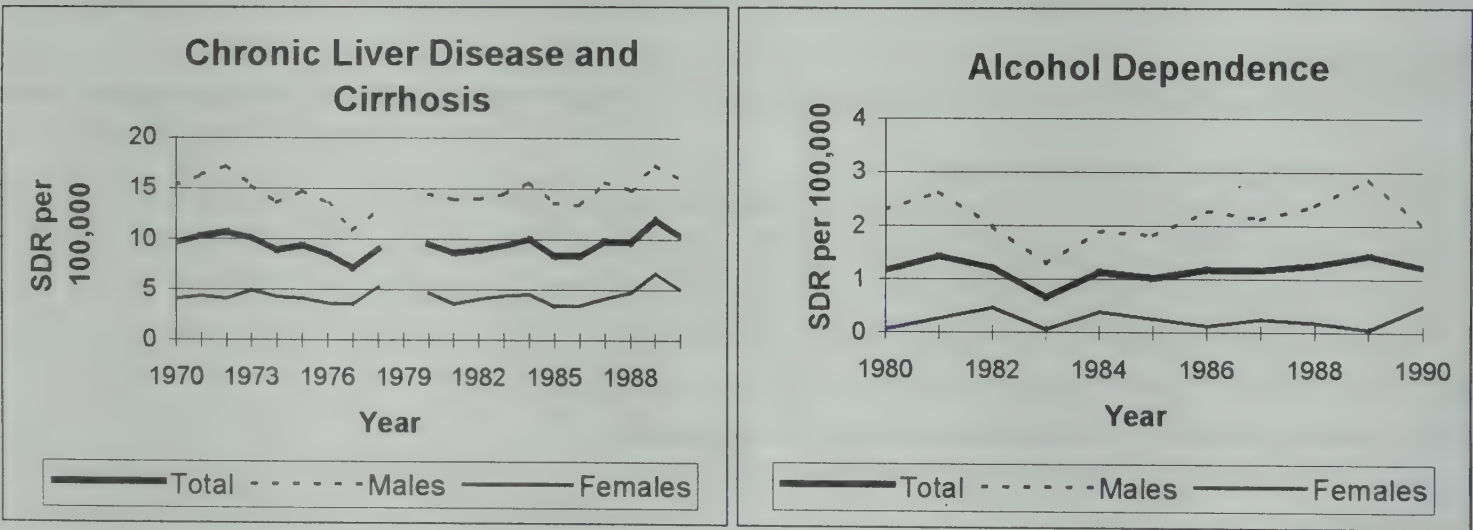
Consumption

Wine is the alcoholic beverage of choice. The spirits data above may be underestimated, based on a comparison with ANCAP data. There are no data available regarding consumption of smuggled or informally- or home-produced alcohol.

Prevalence

As of 1989 no national surveys of drinking prevalence had been done. It was reported that young people were starting to drink from age 14, and increasingly drank beer.

Mortality, morbidity, health and social problems from alcohol use



Alcohol dependence and related disorders

According to a 1989 report, approximately 30 per cent of the beds at the psychiatric hospital in Montevideo were occupied by patients with alcohol problems.

Mortality

Deaths from chronic liver disease and cirrhosis and alcohol dependence have remained at roughly the same level in recent years.

Alcohol policies

Control of alcohol products

As of 1989, distilled spirits were taxed a percentage of retail price, ranging from 44 per cent for *pineau* and 76 per cent for cognac to 113 per cent for *grappa* and *caña*. There are no limits on the hours when alcohol may be sold. There are also no limits on alcohol advertising.

Control of alcohol problems

The sale of alcohol to persons under age 18 is prohibited.

Alcohol data collection, research and treatment

Alcoholics Anonymous has been present in the country since the late 1960s, and has expanded throughout the country, but its numbers and effectiveness are limited.

Venezuela

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	15 091 000	19 502 000	21 844 000
Adult (15+)	8 952 000	12 062 000	13 931 000
% Urban	83.3	90.4	92.8
% Rural	16.7	9.6	7.2

Health status

Life expectancy at birth, 1990-1995 : 69.0 (males), 74.7 (females)

Infant mortality rate in 1990-1995 : 23 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 3020, PPP estimates of GNP per capita (current int'l \$), 1995: 7900.

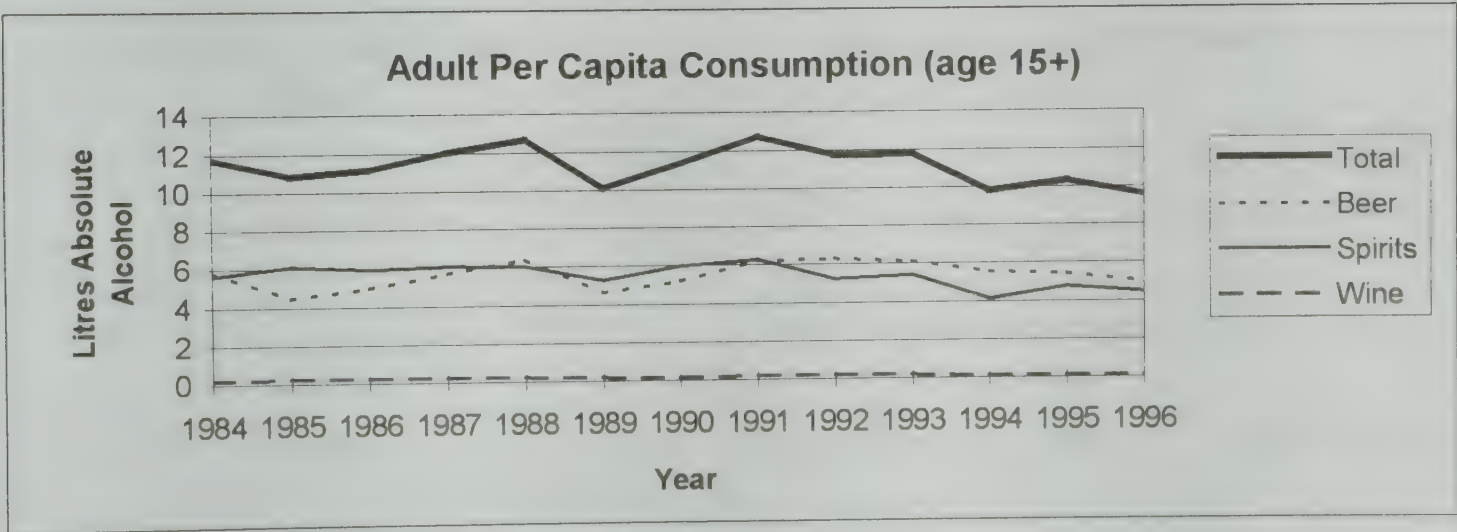
Average distribution of labour force by sector, 1990-1992 : agriculture 13%; industry 25%; services 62%

Adult literacy rate (per cent), 1995 : total 91; male 92; female 90

Alcohol production, trade and industry

Venezuela produces beer, distilled spirits and wine. Cervecerja Polar, the country's largest brewer, has a market share of 90 per cent. The Brazilian brewing giant Companhia Cervejaria Brahma has acquired a controlling interest in Venezuela's Cervecerja Nacional.

Alcohol consumption and prevalence



Consumption

Beer and spirits are the alcoholic beverages of choice. According to figures obtained from the country, wine consumption is extremely low, and barely appears on the chart.

Prevalence

In the 1996 national household survey, of 6 000 respondents, 71.1 per cent reported drinking alcohol at some point in their lives, 62.9 had drunk in the past year, 51.5 per cent in the previous month, and 35.6 in the preceding week.

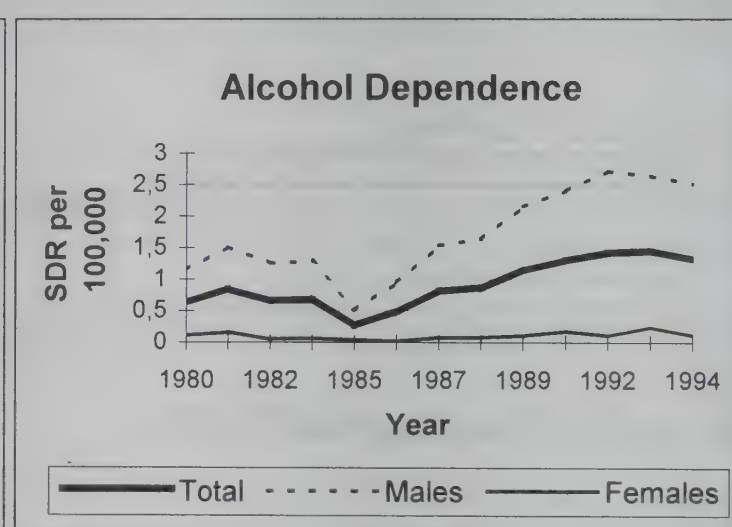
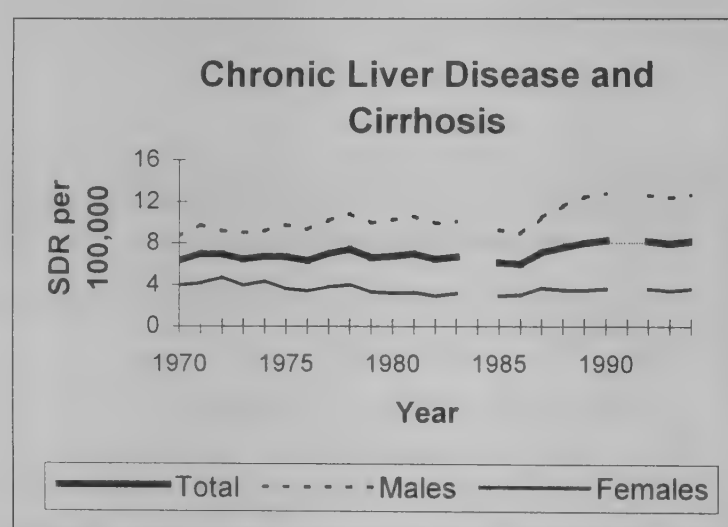
Age patterns

Drinking is slightly higher among young adults. In a 1996 survey of 5401 university students, 80.5 per cent of the respondents had drunk alcohol, 66 per cent in the past year and 28.8 per cent in the past month. When younger ages are included, as in a 1996 survey of 6697 students in basic, middle, diversified and professional schools, 70.4 per cent of students reported using alcohol.

Mortality, morbidity, health and social problems from alcohol use

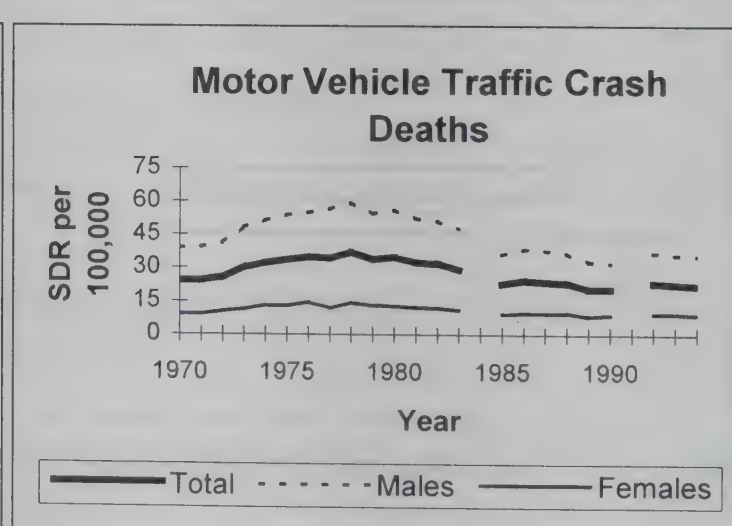
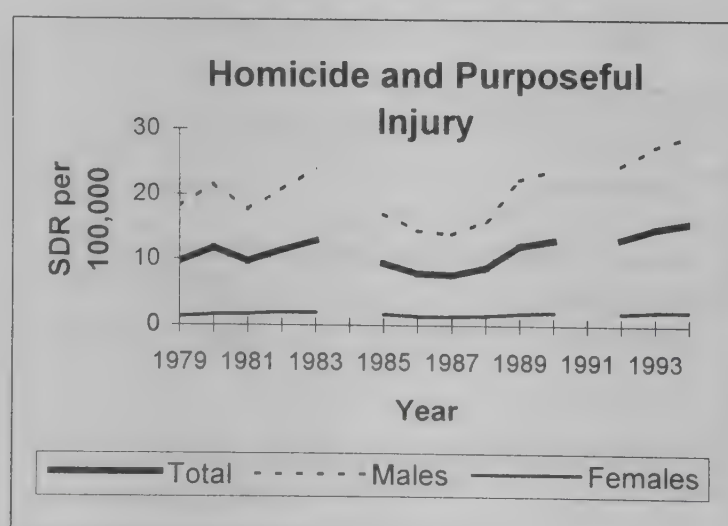
Alcohol dependence and related disorders

The frequency of substance use disorders and non-pathological use of drugs was assessed in a cohort of 1013 undergraduate medical and 426 pharmacy students from the University of the Andes in Merida, Venezuela in the early 1990s. Among medical students, lifetime prevalence of alcohol abuse was 10 per cent, and lifetime prevalence of alcohol dependence was three per cent. Among pharmacy students, lifetime prevalence of alcohol abuse was 6.1 per cent, and lifetime prevalence of alcohol dependence was 1.4 per cent.



Mortality

Alcohol was present in 56 per cent of homicides between 1977 and 1979.



Social Problems

Between 1961 and 1964 at least 50 per cent of road accidents occurred under the influence of alcohol. The proportion of crime associated with alcohol use has been estimated at almost 20 per cent during the 1990s.

Alcohol policies

Control of alcohol products

There is an Organic Law on the sale of liquor, retail distribution of alcohol and on alcohol products (Article 28) which establishes the hours of sale. Article 9 provides criteria for calculating the number of retail distributors permitted, but many places sell alcohol without a licence. Alcohol advertisements have been prohibited on radio and television since 1981.

Alcohol data collection, research and treatment

The National Council on Scientific and Technological Research (CONICIT) coordinates, supervises and promotes research projects.

Psychiatric hospitals have almost no beds for alcohol (and other drug) dependent people, except for Caracas Psychiatric Hospital which has 24 beds for "alcoholism" and another 24 for drug addiction. By law, the Ministries of Health and Social Welfare and of Justice are responsible for treating prisoners who have alcohol problems, but they have only a small unit for the treatment of alcohol (and other drug) dependent people and some orientation centres for outpatient care. The Ministry of Family participates in treatment and rehabilitation through the Jose Felix Ribas Foundation which has six hospitalization centres that function as treatment communities, and seven centres for outpatient care.

Eastern Mediterranean Region

Afghanistan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	16 063 000	15 045 000	20 141 000
Adult (15+)	9 160 000	8 468 000	11 935 000
% Urban	15.6	18.3	20.0
% Rural	84.3	81.8	80.0

Health status

Life expectancy at birth, 1990-1995 : 43 (males), 44 (females)

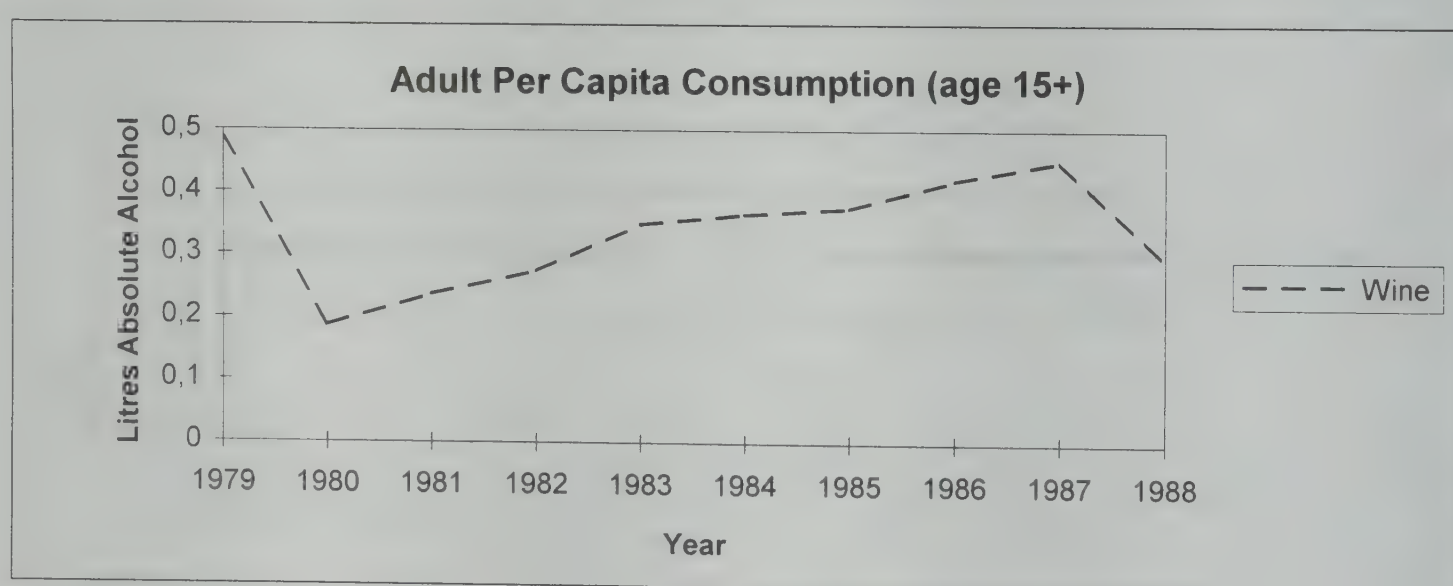
Infant mortality rate in 1990-1995 : 163 per 1000 live births

Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 61%; industry 14%; services 25%

Adult literacy rate (per cent), 1995 : total 32; male 47; female 15

Alcohol consumption and prevalence



Consumption

Afghanistan reports no beer production after 1970, no spirits production and very low levels of spirits imports. Its wine consumption is low, and has likely fallen lower with the increasing national observance of Islamic law in recent years.

Bahrain

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	347 000	490 000	564 000
Adult (15+)	227 000	334 000	381 000
% Urban	80.5	87.5	90.3
% Rural	19.5	12.5	9.7

Health status

Life expectancy at birth, 1990-1995 : 69.8 (males), 74.1 (females)

Infant mortality rate in 1990-1995 : 18 per 1000 live births

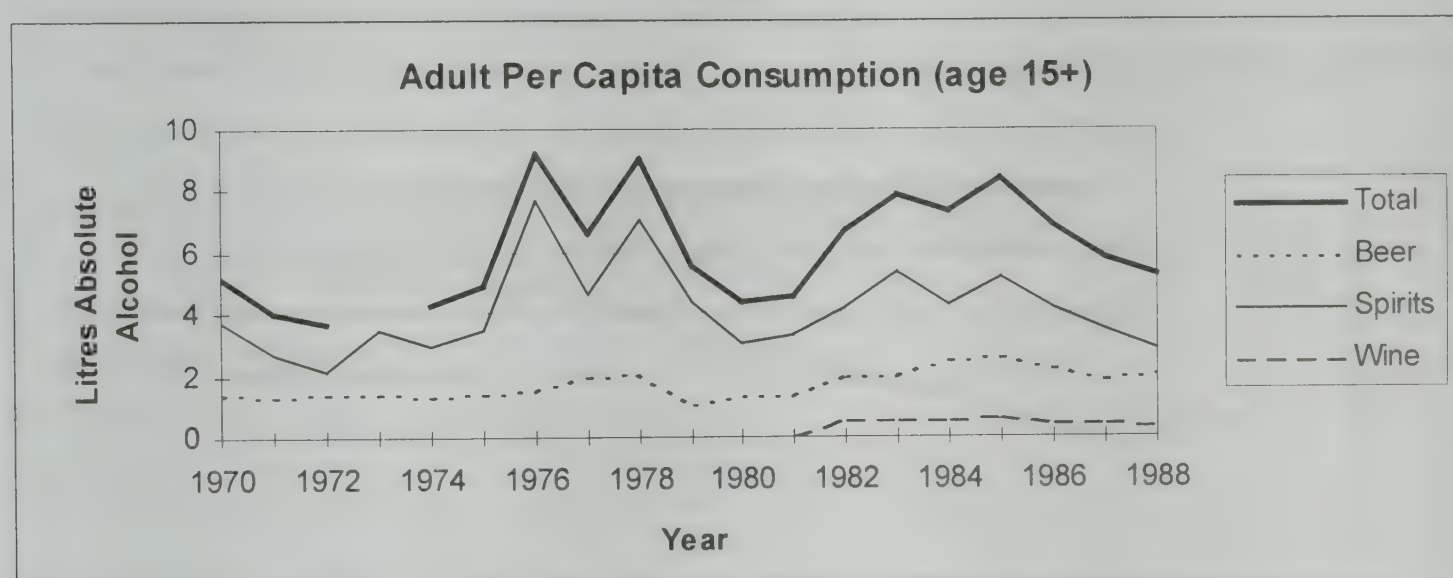
Socioeconomic situation

GNP per capita (US\$), 1995 : 7840, PPP estimate of GNP per capita (current int'l \$) : 13 400

Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 14%; services 83%

Adult literacy rate (per cent), 1995 : total 85; male 89; female 79

Alcohol consumption and prevalence



Consumption

Spirits are the primary type of alcoholic beverage consumed in Bahrain. The country reports no domestic production of alcoholic beverages, and there is no data available after 1988.

Alcohol policies

Alcohol data collection, research and treatment

The Ministry of Health reports that the Drug Rehabilitation Unit at the Psychiatric Hospital is designated as the only treatment centre for alcohol-related problems on the island. The Ministry also reports that any other hospital, health centre or private practitioner is prohibited from treating patients for problems pertaining to alcohol or other drugs. The majority of cases are treated as inpatients. If no vacant beds are available, the patient can be treated on an outpatient basis. The average duration of inpatient treatment is two to four weeks.

Cyprus

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	629 000	702 000	742 000
Adult (15+)	475 000	520 000	545 000
% Urban	46.0	51.4	54.1
% Rural	54.0	48.6	45.9

Health status

Life expectancy at birth, 1990-1995 : 74.8 (males), 79.2 (females)
Infant mortality rate in 1990-1995 : 9 per 1000 live births

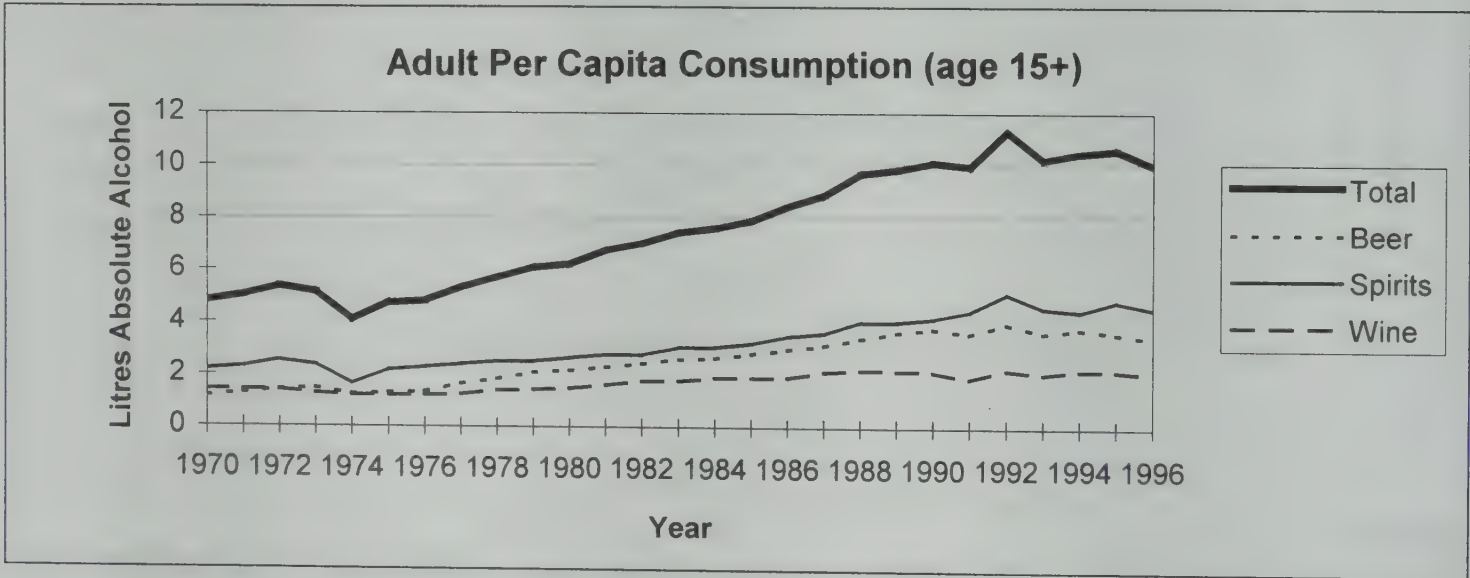
Socioeconomic situation

GNP per capita (US\$), 1994: 11 576
Average distribution of labour force by sector, 1995 : agriculture 11%; industry 25%; services 64%
Adult literacy rate (per cent), 1992: total 94; male 98 female 90

Alcohol production, trade and industry

Cyprus is a significant exporter of both wine and spirits.

Alcohol consumption and prevalence



Consumption

The above graph, drawn from figures provided by the Ministry of Finance, shows that Cypriot consumption of alcoholic beverages has increased at a steady pace in all three categories since 1974.

Age patterns

A study of 632 adolescents between the ages of 15 to 16 was carried out in 1995. The response rate was 93 per cent. Eighty-five per cent of the respondents had drunk any alcoholic beverage in the last 12 months, and 27 per cent had been drunk in the last 12 months. Lifetime prevalence of alcohol use was 90 per cent (92 per cent for boys and 88 per cent for girls).

Economic impact of alcohol

In 1991, the percentage of annual household expenditure devoted to alcoholic beverages (for those over the age of 15) was 0.6 per cent. In 1995, 0.4 per cent of the total labour force was employed by the alcohol beverage industry.

Mortality, morbidity, health and social problems from alcohol use

Social Problems

The rate of convictions for driving under the influence of alcohol decreased from 2.6 to 2.2, per 100 000 population, between 1980 and 1990, then rose to 3.6 in 1994.

Alcohol policies

Alcohol data collection, research and treatment

Mental Health Services, the Ministry of Health and the National Committee for Prevention of Alcohol and Drug Abuse all are involved with coordination, application, formulation, monitoring and evaluation of national alcohol policies. The Ministry of Health and Mental Health Services organizes regular workshops for professionals, as well as seminars and lectures on education relating to treatment and rehabilitation. Mental health services are available in Nicosia, Limassol and Larnaca.

Djibouti

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	281 000	517 000	577 000
Adult (15+)	158 000	294 000	335 000
% Urban	73.7	80.7	82.8
% Rural	26.3	19.3	17.2

Health status

Life expectancy at birth, 1990-1995 : 46.7 (males), 50.0 (females)

Infant mortality rate in 1990-1995 : 115 per 1000 live births

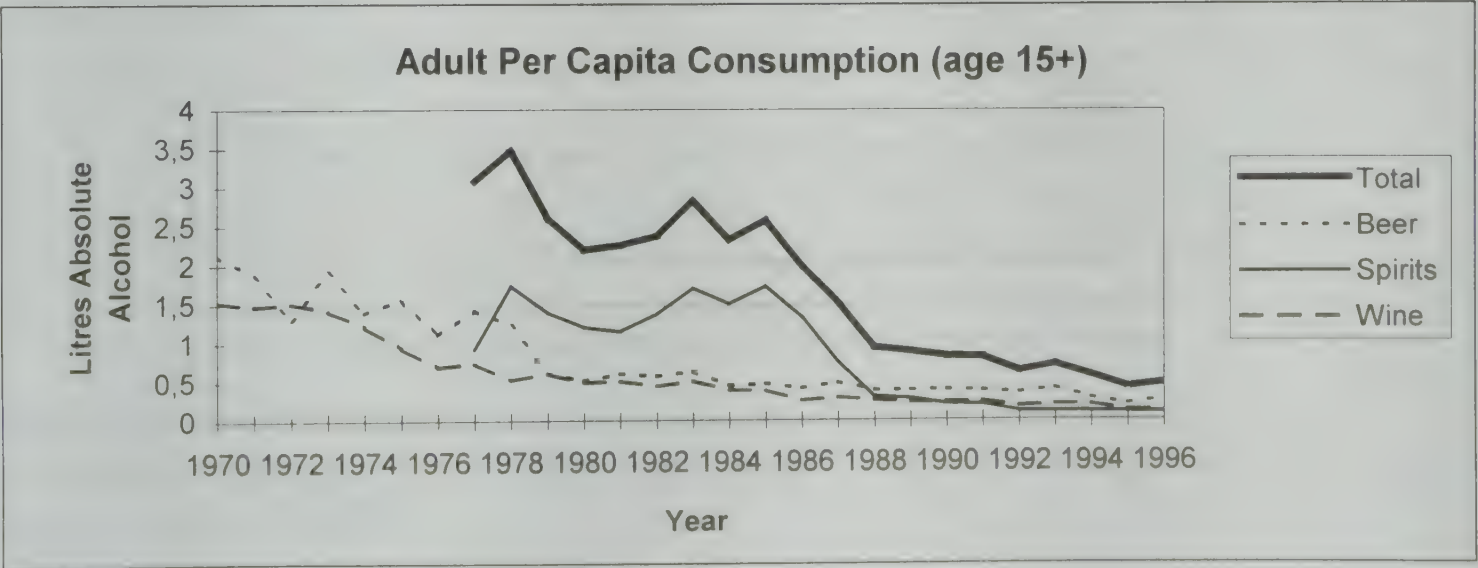
Socioeconomic situation

Adult literacy rate (per cent), 1995 : Total 46

Alcohol production, trade and industry

Djibouti produces no alcoholic beverages.

Alcohol consumption and prevalence



Consumption

Since 1983, consumption of alcoholic beverages has fallen in all three categories, particularly spirits. There are no data available on the consumption of smuggled or informally- or home-produced alcoholic beverages.

Egypt

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	43 749 000	56 312 000	62 931 000
Adult (15+)	26 459 000	33 934 000	39 007 000
% Urban	43.8	43.9	44.8
% Rural	56.2	56.1	55.2

Health status

Life expectancy at birth, 1990-1995 : 62.4 (males), 64.8 (females)
Infant mortality rate in 1990-1995 : 67 per 1000 live births

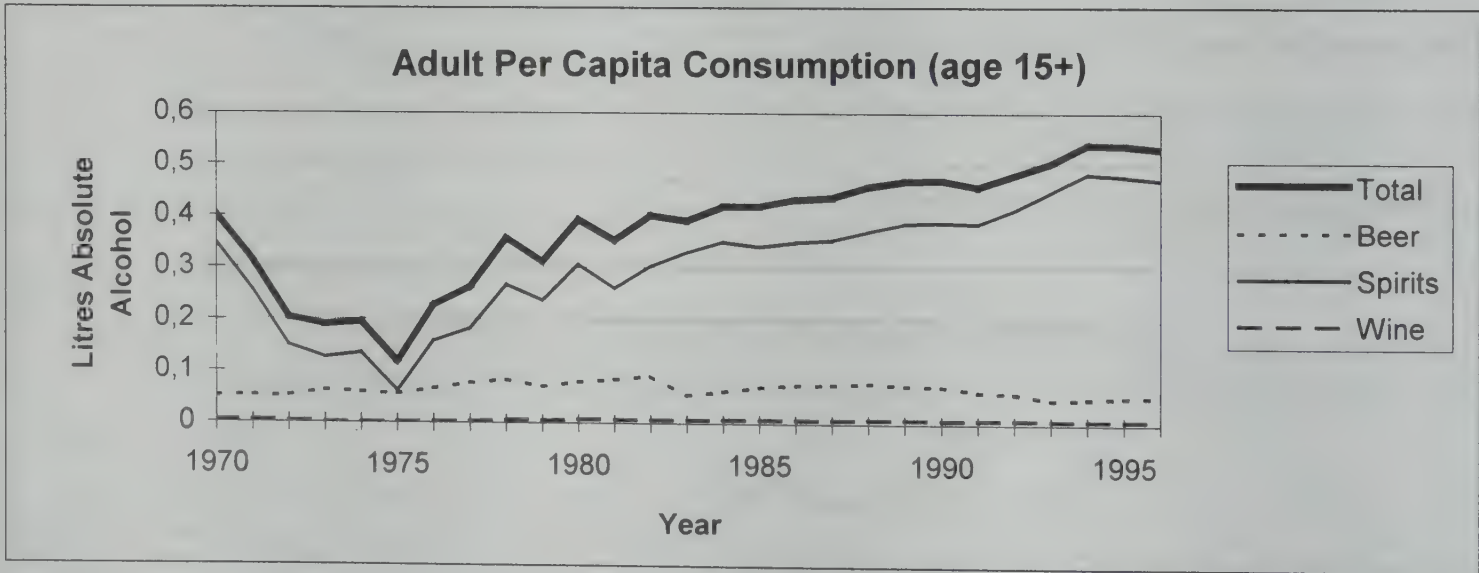
Socioeconomic situation

GNP per capita (US\$), 1995: 790, PPP estimates of GNP per capita (current int'l \$), 1995: 3 820
Average distribution of labour force by sector, 1990-1992 : agriculture 42%; industry 21%; services 37%
Adult literacy rate (per cent), 1995 : total 51; male 64; female 39

Alcohol production, trade and industry

Egypt produces beer, distilled spirits, and wine.

Alcohol consumption and prevalence



Consumption

Distilled spirits is the alcoholic beverage of choice in Egypt and consumption has steadily increased since 1975. Beer consumption has remained steady since 1970 at a very low level (less than 0.1 litres of pure alcohol per adult).

Prevalence

A standardized questionnaire was administered to a representative sample of 3686 male technical school students in Greater Cairo. Results, published in 1982, showed that about 33 per cent had used alcohol at least once.

Alcohol policies

Control of alcohol products

The legal minimum drinking age is 21. Alcoholic beverages are not served in public places, with the exception of hotels and tourist establishments. No alcohol may be served before 11:00 hours or after midnight, although the hours can be adjusted by special decrees to suit the needs of travellers and hotel lodgers. Alcohol advertising was banned entirely in 1976.

Iraq

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	13 007 000	18 078 000	20 449 000
Adult (15+)	7 022 000	10 085 000	11 539 000
% Urban	65.5	71.8	74.6
% Rural	34.5	28.2	25.4

Health status

Life expectancy at birth, 1990-1995 : 64.5 (males), 67.5 (females)
Infant mortality rate in 1990-1995 : 58 per 1000 live births

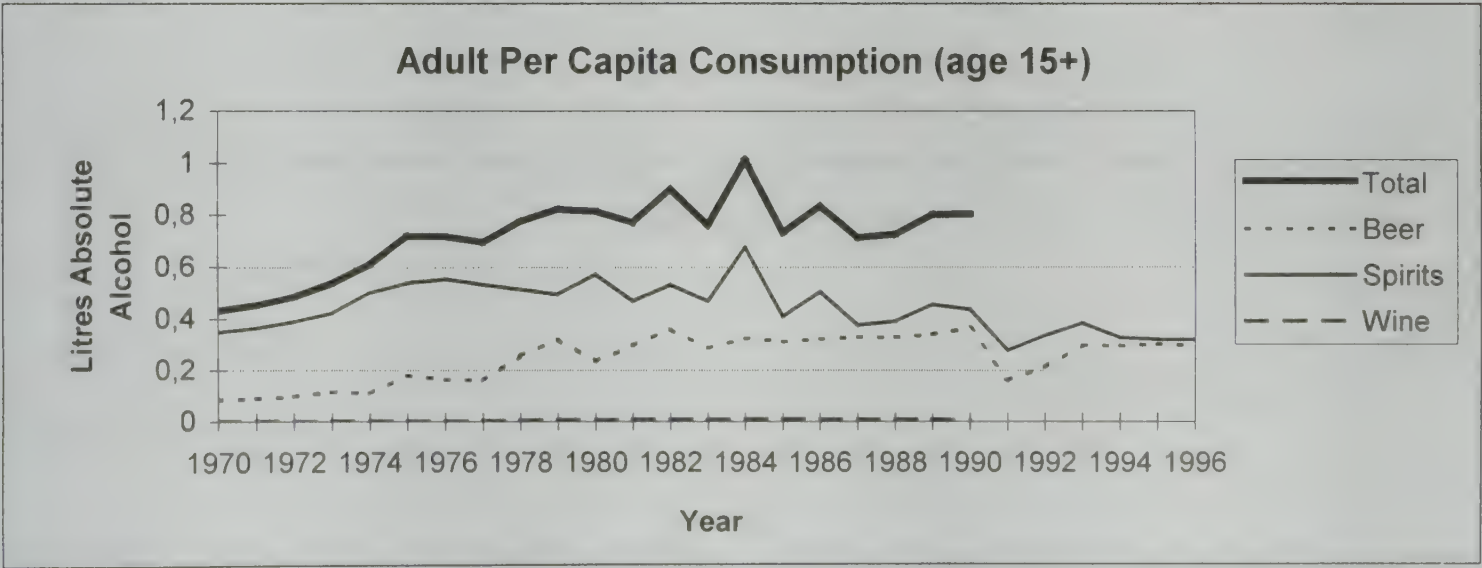
Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 14%; industry 19%; services 67%
Adult literacy rate (percent), 1992 : total 62; male 73; female 51

Alcohol production, trade and industry

Iraq produces beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice is distilled spirits. There is no information available on wine consumption in Iraq after 1990.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of cases of alcohol dependence syndrome decreased from 100 in 1989 to 42 in 1992. The number of alcoholic psychosis cases rose from 195 to 207 during the same period.

Morbidity

The total number of alcoholic cardiomyopathy cases declined from 71 to 65 between 1989 and 1992. The total number of alcoholic polyneuropathy cases declined from four to one during the same period.

Alcohol policies

Control of alcohol products

In 1994, President Saddam Hussein ordered all discos and bars in Iraq to be closed, banned all sales of alcoholic beverages and prohibited any drinking of alcohol in public.

Control of alcohol problems

There is some general education about alcohol and alcohol problems conducted by the mass media, as well as school visits and meetings and university-based activities.

Alcohol data collection, research and treatment

The Iraqi National Committee for Prevention of Alcohol Dependence and Drug Abuse is responsible for national alcohol-related policies. Both this committee and the Department of Bio-Statistics in the Ministry of Health are involved in the collection of data about various alcohol-related health problems.

There is a centre for the treatment of alcohol dependence at Ibn-Rushd Teaching Hospital for Psychiatric Diseases in Baghdad. It deals with the treatment and rehabilitation of persons with alcohol problems, support for families of high risk drinkers, and education and research on treatment and rehabilitation measures. The Social Work Department at Ibn-Rushd Hospital and other psychiatric units in general hospitals provide services in coordination with other related offices. There is also a Centre for Treatment of Alcohol Dependence in Baghdad.

Jordan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 923 000	4 259 000	5 439 000
Adult (15+)	1 478 000	2 370 000	3 084 000
% Urban	59.9	68.0	71.5
% Rural	40.1	32.0	28.5

Health status

Life expectancy at birth, 1990-1995 : 66.2 (males), 69.8 (females)

Infant mortality rate in 1990-1995 : 36 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1510 , PPP estimates of GNP per capita (current int'l \$), 1995: 4060

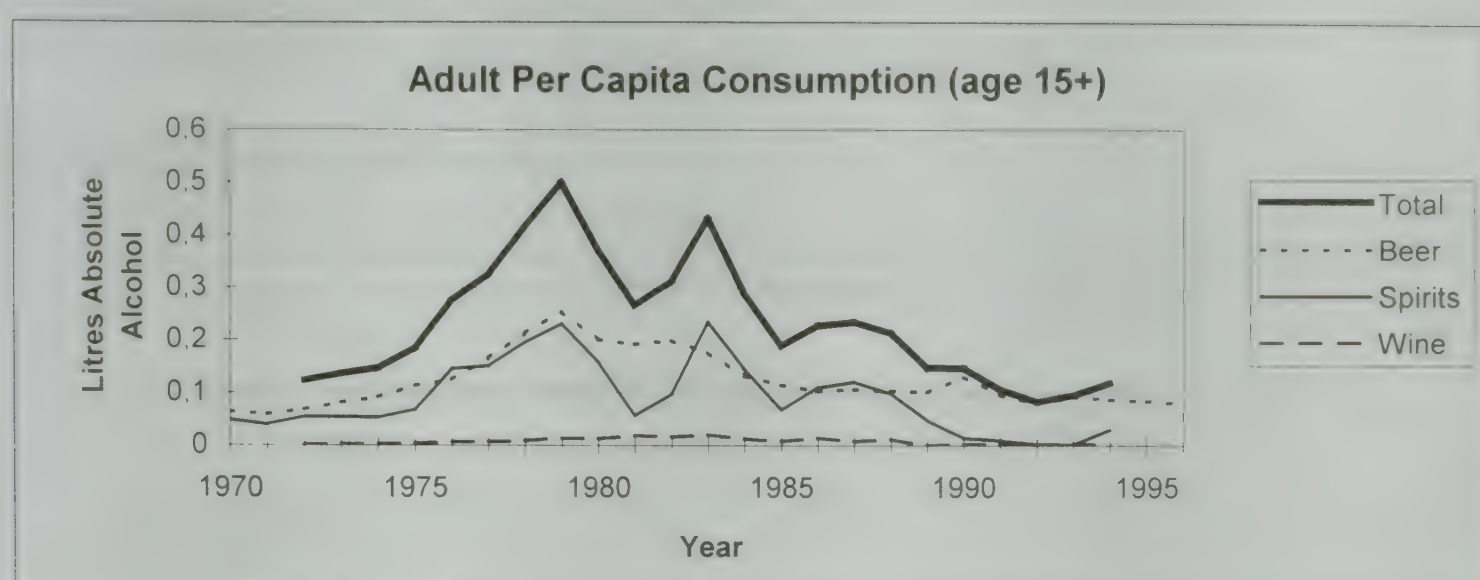
Average distribution of labour force by sector, 1990-1992 : agriculture 10%; industry 26%; services 64%

Adult literacy rate (per cent), 1992 : total 82; male 91; female 72

Alcohol production, trade and industry

Jordan produces beer and, beginning in 1991, reported domestic production of distilled spirits, apparently primarily for export.

Alcohol consumption and prevalence



Consumption

Alcohol consumption in Jordan is quite low, and mostly consists of beer and distilled spirits consumption.

Lebanon

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 669 000	2 555 000	3 009 000
Adult (15+)	1 598 000	1 662 000	1 983 000
% Urban	73.4	83.8	87.2
% Rural	26.6	16.2	12.8

Health status

Life expectancy at birth, 1990-1995 : 66.6 (males), 70.5 (females)

Infant mortality rate in 1990-1995 : 34 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2660.

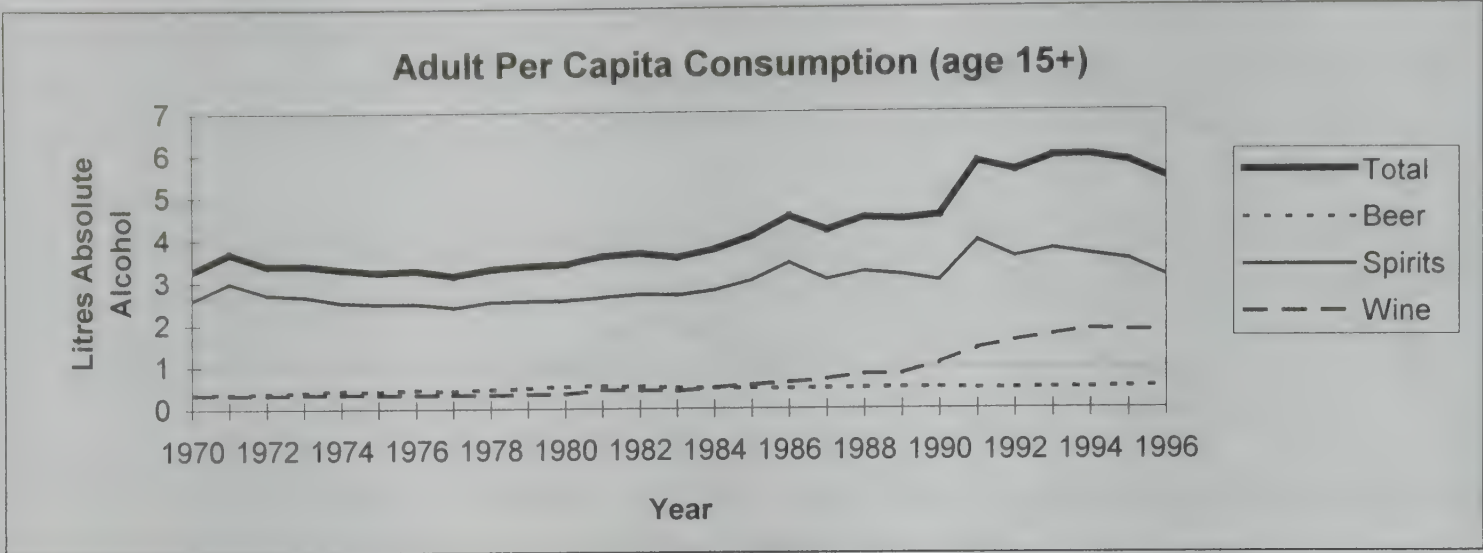
Average distribution of labour force by sector, 1990-1992 : agriculture 14%; industry 27%; services 59%

Adult literacy rate (per cent), 1995 : total 92; male 95; female 90

Alcohol production, trade and industry

Lebanon produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

Consumption of wine and distilled spirits has been growing in Lebanon since the mid-1980s years. Domestic production of wine has tripled in the past decade, while spirits production has grown by 50 per cent.

Morocco

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	19 382 000	24 334 000	27 028 000
Adult (15+)	11 010 000	14 864 000	17 274 000
% Urban	41.0	46.1	48.4
% Rural	59.0	53.9	51.6

Health status

Life expectancy at birth, 1990-1995 : 61.6 (males), 65.0 (females)

Infant mortality rate in 1990-1995 : 68 per 1000 live births

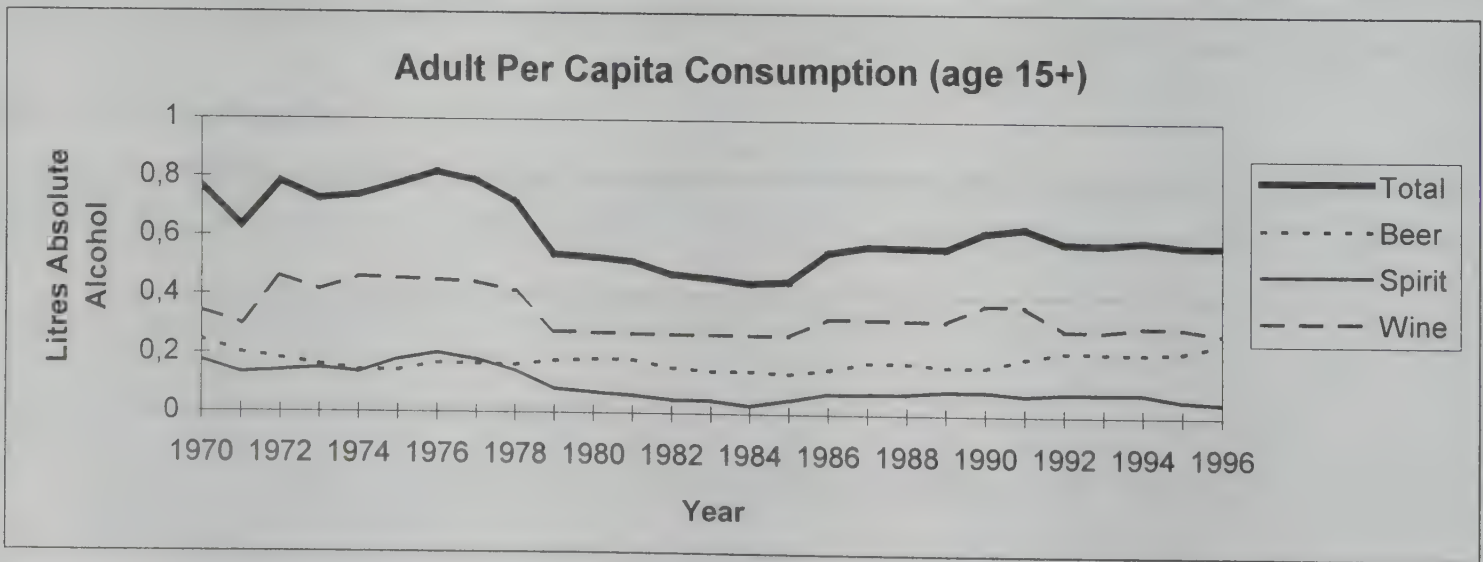
Socioeconomic situation

GNP per capita (US\$), 1995: 447, PPP estimates of GNP per capita (current int'l \$), 1995: 3340

Average distribution of labour force by sector, 1990-1992 : agriculture 46%; industry 25%; services 29%

Adult literacy rate (per cent), 1995 : total 44; male 57; female 37

Alcohol consumption and prevalence



Consumption

Wine is the alcoholic beverage of choice in Morocco, although recently beer has risen to almost the same level in recorded adult consumption.

Prevalence

In 1990 an open questionnaire was administered to 595 medical students, (64 per cent male, 36 per cent female) 79 per cent of whom were between the ages of 21 and 26. Approximately 25 per cent had tried alcohol, and 23 per cent were current users: 8 females and 125 males. The overall figures were less than in a similar 1985 study in which 27 per cent had reported using alcohol.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

Alcohol-related hospital admissions fell in the mid-1980s from 89 in 1983 to 60 in 1986, after which data are not available.

Alcohol policies

Control of alcohol products

It is illegal to offer or sell alcohol to those under 16 years of age. An Act passed in 1967 regulates the sale of alcoholic beverages stipulating that liquor outlets shall be far from religious buildings and military establishments.

Control of alcohol problems

The penal code of Morocco states that "drunkenness does not and should not diminish the civil responsibility. Drinking is not an excusable act, but can make things worse."

Oman

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 101 000	1 751 000	2 163 000
Adult (15+)	603 000	923 000	1 136 000
% Urban	7.6	11.0	13.2
% Rural	92.4	89.0	86.8

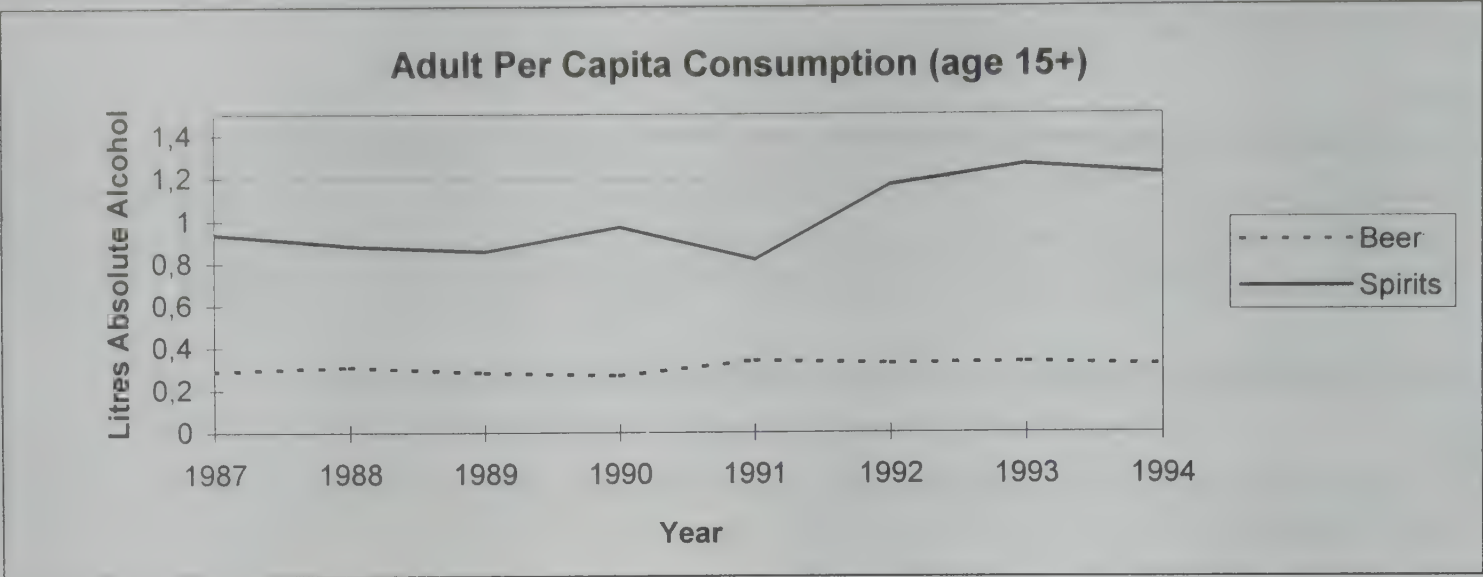
Health status

Life expectancy at birth, 1990-1995 : 67.7 (males), 71.8 (females)
Infant mortality rate in 1990-1995 : 30 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 4820 , PPP estimates of GNP per capita (current int'l \$), 1995: 8820
Average distribution of labour force by sector, 1990-1992 : agriculture 49%; industry 22%; services 29%

Alcohol consumption and prevalence



Consumption

Oman only reported figures for domestic wine production for the years 1992 and 1993. Domestic production of wine is substantial, and so these two years give the most accurate picture of actual alcohol consumption, somewhere between 3.5 and 7.5 litres of absolute alcohol per adult.

Pakistan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	85 299 000	121 933 000	140 497 000
Adult (15+)	47 451 000	68 130 000	78 275 000
% Urban	28.1	32.0	34.7
% Rural	71.9	68.0	65.3

Health status

Life expectancy at birth, 1990-1995 : 60.6 (males), 62.6 (females)
Infant mortality rate in 1990-1995 : 91 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 460, PPP estimates of GNP per capita (current int'l \$), 1995: 2230.
Average distribution of labour force by sector, 1990-1992 : agriculture 47%; industry 20%; services 33%
Adult literacy rate (per cent), 1992 : total 36; male 49; female 22

Alcohol production, trade and industry

Since 1977, Pakistan has been operating under a Prohibition Order that forbids the purchase of alcohol by Muslims, who form 97 per cent of the population. The nation's largest brewer, Murree Brewery, reported net profits in 1993 of US\$ 770 000, up from US\$ 463 000 in 1992.
In a 1995 court case, Murree Brewery, which had a virtual monopoly over the market, was ordered to stop selling in Sindh province which opened up the market for the new Beach Brewery. Allegations of wrongdoing resulted in a Sindh High Court order preventing either company from selling in the province. This ban was later rescinded.

Alcohol consumption and prevalence

Consumption

The Finnish Foundation for Alcohol Studies reported Pakistani domestic consumption of spirits and imputed consumption at approximately 0.25 litres of absolute alcohol per adult in the early 1970s. However, there has been no reported domestic spirits production since 1971. Although 97 per cent of the population is forbidden to drink, alcohol industry sources report that alcohol consumption has been increasing steadily, and enforcement of the law has been erratic.

Alcohol policies

Control of alcohol products

Alcohol and alcohol advertising are officially banned, in deference to Islamic law. Only non-Muslims with a liquor permit may purchase liquor legally.

Alcohol data collection, research and treatment

It is reported that there are no specific legislative provisions pertaining to treatment and rehabilitation, although a draft mental health law is under active consideration. In addition, it is proposed to establish adequately equipped detoxification centres at the Federal and district headquarters hospitals.

Qatar

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	229 000	485 000	551 000
Adult (15+)	156 000	352 000	399 000
% Urban	85.6	89.9	91.4
% Rural	14.4	10.1	8.6

Health status

Life expectancy at birth, 1990-1995 : 68.8 (males), 74.2 (females)

Infant mortality rate in 1990-1995 : 20 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 11 600 , PPP estimates of GNP per capita (current int'l \$), 1995: 17 690
Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 28%; services 69%

Adult literacy rate (per cent), 1995 : total 79; male 79; female 80

Alcohol production, trade and industry

Qatar does not produce any alcoholic beverages.

Alcohol consumption and prevalence

Consumption

An Islamic nation with a large population of migrant workers from neighbouring nations, Qatar relies on imports for its supply of alcoholic beverages. From the figures available, per capita consumption is approximately one litre of absolute alcohol per adult per year, resulting primarily from consumption of imported spirits. There is no data on wine imports or consumption.

Saudi Arabia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 604 000	16 048 000	17 880 000
Adult (15+)	5 348 000	9 343 000	10 393 000
% Urban	66.8	77.3	80.2
% Rural	33.2	22.7	19.8

Health status

Life expectancy at birth, 1990-1995 : 68.4 (males), 71.4 (females)

Infant mortality rate in 1990-1995 : 29 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 7 040.

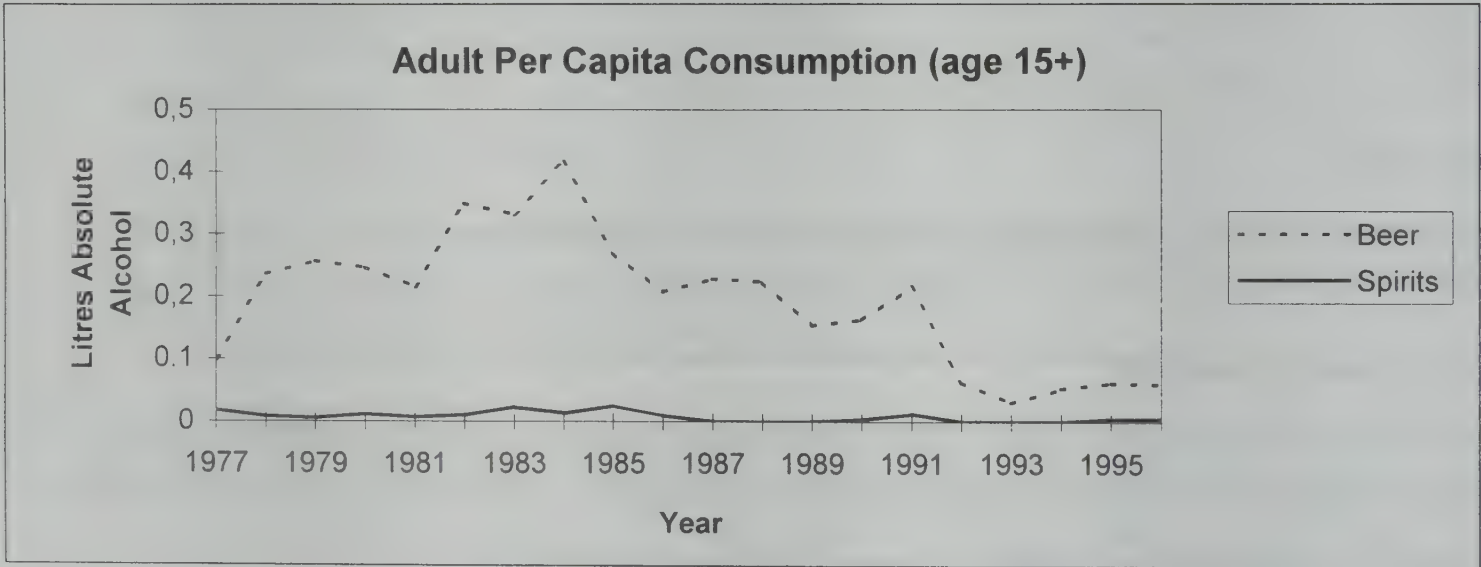
Average distribution of labour force by sector, 1990-1992 : agriculture 48%; industry 14%; services 37%

Adult literacy rate (per cent), 1995 : total 63; male 72; female 50

Alcohol production, trade and industry

Saudi Arabia does not produce alcoholic beverages.

Alcohol consumption and prevalence



Consumption

Based on import figures, Saudi Arabia records a low per capita consumption of alcohol, resulting primarily from beer consumption. There are no data available on wine use after 1975.

Alcohol use among population subgroups

Researchers surveyed 116 consecutive patients admitted to Al-Amal Hospital in the Dammam area, a specialized drug abuse centre in Eastern Saudi Arabia. Alcohol was the second most commonly abused substance (after heroin), with 11.2 per cent abusing it alone, and an additional 20 per cent abusing it in combination with other drugs. This finding (published in 1995) was comparable to other studies in Saudi Arabia, which have found as many as 71 per cent of other substance users also using alcohol.

Mortality, morbidity,health and social problems from alcohol use

Social problems

In 1977, 12 per cent of the total number of prisoners in Saudi Arabia were incarcerated for violations of laws against alcohol use or trade, and 65 per cent of these were foreign nationals.

Alcohol policies

Control of alcohol products

Alcohol use or smuggling is a crime in Saudi Arabia.

Control of alcohol problems

Physical punishment (whipping) is legislated as a penalty for intake of alcoholic beverages.

Sudan (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	18 681 000	24 585 000	28 098 000
Adult (15+)	10 298 000	13 560 000	15 789 000
% Urban	20.0	22.5	24.6
% Rural	80.0	77.4	75.4

Health status

Life expectancy at birth, 1990-1995 : 51.6 (males), 54.4 (females)

Infant mortality rate in 1990-1995 : 78 per 1000 live births

Socioeconomic situation

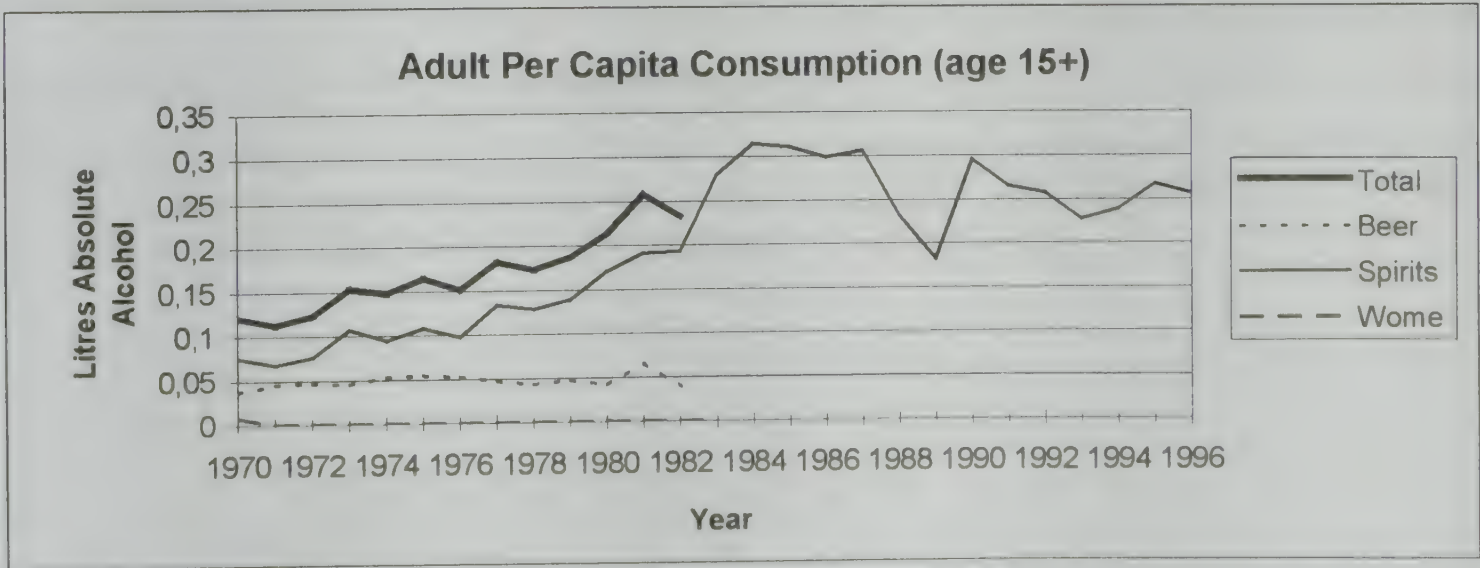
Average distribution of labour force by sector, 1990-1992 : agriculture 72%; industry 5%; services 23%

Adult literacy rate (per cent), 1995 : total 46; male 58; female 35

Alcohol production, trade and industry

The Sudan produces distilled spirits, and reported production of beer until 1981.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption in the Sudan is very low. There are no data available on beer or wine consumption after 1982.

Prevalence

Anedoctal reports mention “European influence” as the reason for the increase in problem drinking among young males whereas consumption among women is still very rare.

Mortality, morbidity, health and social problems from alcohol use

Social problems

Drinking, violence and marital strife are reported to be frequent among the Bari people of southern Sudan. Resolution of conflicts arising from alcohol abuse are considered the responsibility of old men as lineage heads, who bring the offending drinker closer to controlling social networks.

Alcohol policies

Control of alcohol problems

In 1972, a new provision was introduced into the Sudan Penal Code stating that individuals acting in a state of intoxication are assumed to have the same knowledge as they would have had if they had not been intoxicated. This means that intoxication is not a defence against a criminal charge.

Syrian Arab Republic (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 704 000	12 348 000	14 661 000
Adult (15+)	4 480 000	6 399 000	7 724 000
% Urban	46.7	50.2	52.4
% Rural	53.3	49.8	47.6

Health status

Life expectancy at birth, 1990-1995 : 65.2 (males), 69.2 (females)

Infant mortality rate in 1990-1995 : 39 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1120, PPP estimates of GNP per capita (current int’l \$), 1995: 5320

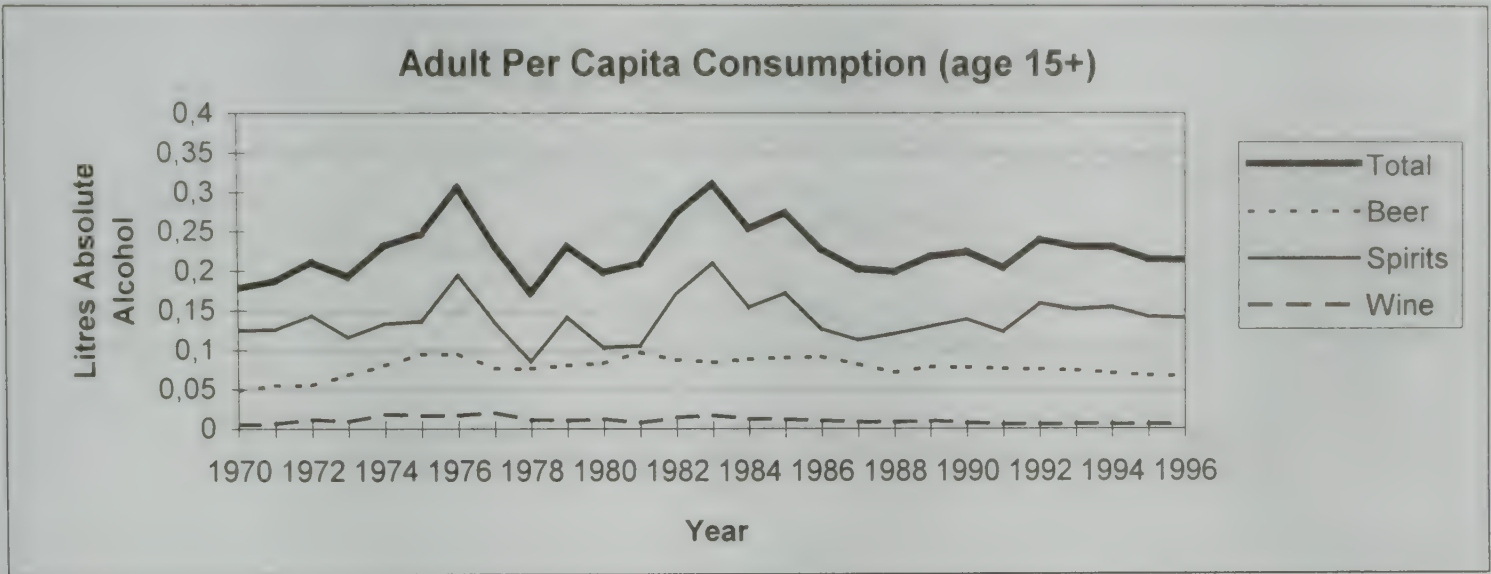
Average distribution of labour force by sector, 1990-1992 : agriculture 23%; industry 29%; services 48%

Adult literacy rate (per cent), 1995 : total 71; male 86; female 56

Alcohol production, trade and industry

The Syrian Arab Republic produces beer, wine and distilled spirits.

Alcohol consumption and prevalence



Consumption

Alcohol consumption in the Syrian Arab Republic comes primarily from distilled spirits.

Tunisia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 384 000	8 080 000	8 896 000
Adult (15+)	3 725 000	5 038 000	5 790 000
% Urban	51.4	54.9	57.2
% Rural	48.6	45.1	42.8

Health status

Life expectancy at birth, 1990-1995 : 66.9 (males), 68.7 (females)

Infant mortality rate in 1990-1995 : 43 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1500, PPP estimates of GNP per capita (current int’l \$), 1995: 4690.

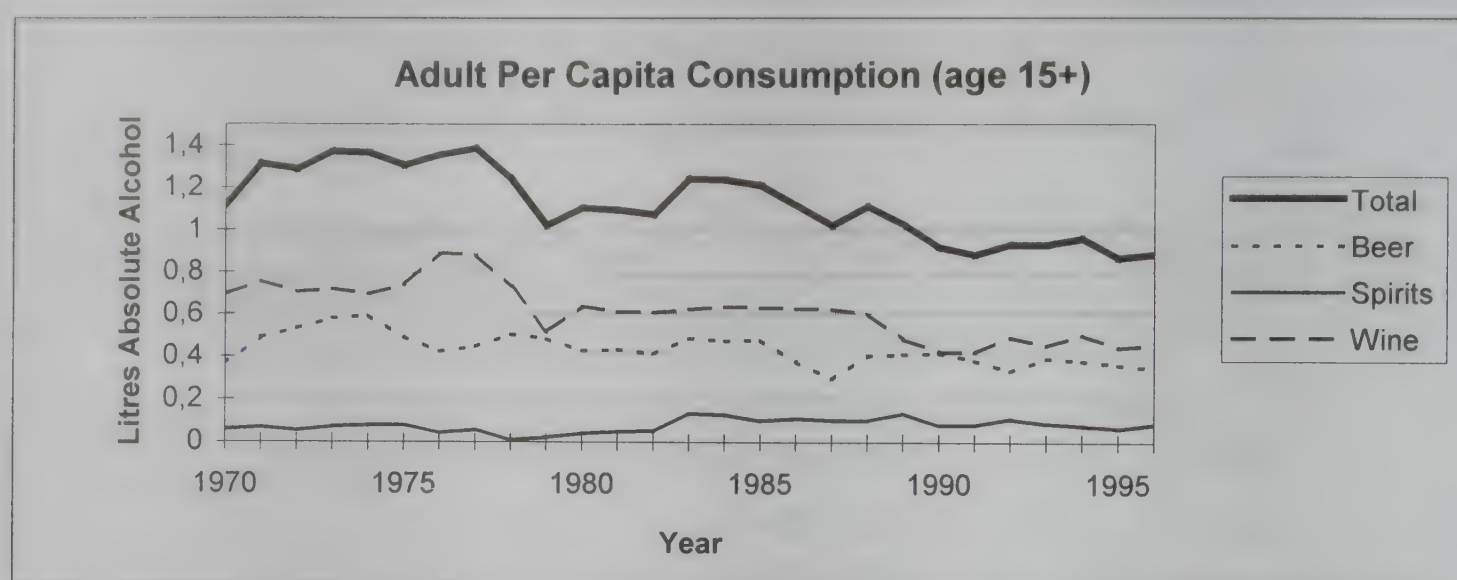
Average distribution of labour force by sector, 1990-1992: agriculture 26%; industry 34%; services 40%

Adult literacy rate (per cent), 1995 : total 67; male 79; female 55

Alcohol production, trade and industry

Tunisia produces beer, wine and spirits. There is no information available on the production of spirits after 1981. However, export figures indicate that spirits were still being produced through 1994. Much of the country’s wine production is exported.

Alcohol consumption and prevalence



Consumption

Wine is the alcoholic beverage of choice of Tunisians, and the major determinant of the country's per capita alcohol consumption. Since 1977 there has been a decrease in overall wine consumption in the country, parallel to a decrease in production and maintenance of substantial exports.

United Arab Emirates (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 015 000	1 671 000	1 904 000
Adult (15+)	725 000	1 156 000	1 310 000
% Urban	71.5	81.0	84.0
% Rural	28.5	19.0	16.0

Health status

Life expectancy at birth, 1990-1995 : 73.0 (males), 75.3 (females)

Infant mortality rate in 1990-1995 : 19 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 17 400 , PPP estimates of GNP per capita (current int'l \$), 1995: 16 470

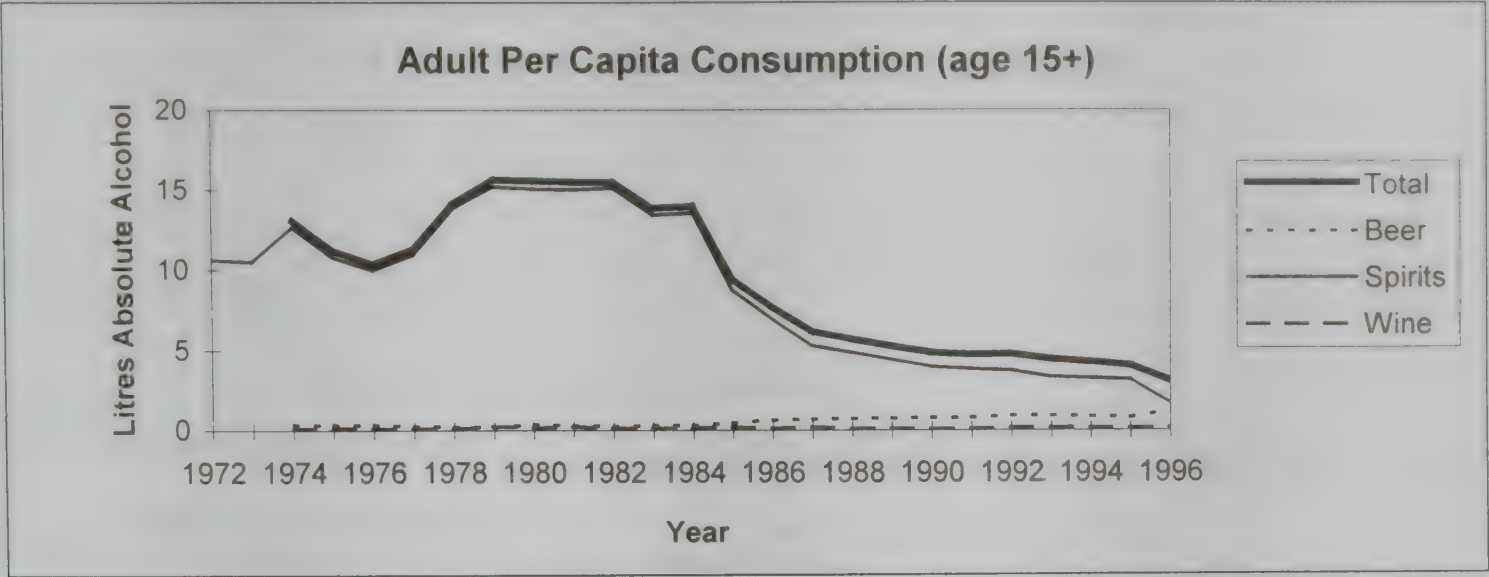
Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 38%; services 57%

Adult literacy rate (per cent), 1995 : total 79; male 79; female 80

Alcohol production, trade and industry

The United Arab Emirates do not produce alcoholic beverages.

Alcohol consumption and prevalence



Consumption

Alcohol consumption has fallen steadily since 1982, following a decrease in consumption of imported spirits, the most commonly used alcoholic beverage.

Alcohol policies

Control of alcohol products

Under Islamic law, alcohol is forbidden at all times, but alcoholic beverages are still available in Dubai's bars and restaurants. In 1997, for the first time, alcohol was available throughout the day during Ramadan. Previously, it was illegal to serve alcohol before sundown.

Yemen

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 219 000	11 311 000	14 501 000
Adult (15+)	4 089 000	5 854 000	7 730 000
% Urban	20.2	28.9	33.6
% Rural	79.8	71.1	66.4

Health status

Life expectancy at birth, 1990-1995 : 49.9 (males), 50.4 (females)

Infant mortality rate in 1990-1995 : 120 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 260.

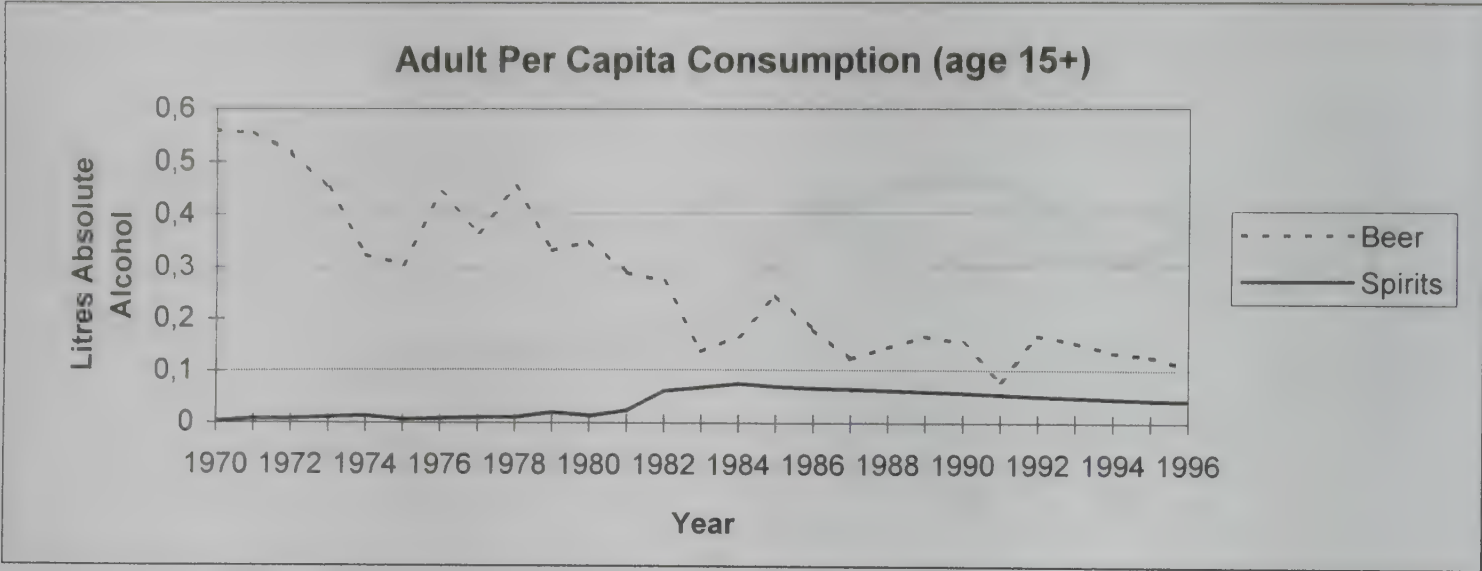
Average distribution of labour force by sector, 1990-1992 : agriculture 63%; industry 11%; services 26%

Adult literacy rate (per cent), 1992 : total 41; male 56; female 28

Alcohol production, trade and industry

Yemen produces beer, and imports beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

Recorded consumption comes primarily from beer produced locally. There are no data available regarding consumption of smuggled or informally- or home-produced alcoholic beverages.

European Region

Albania

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 671 000	3 289 000	3 441 000
Adult (15+)	1 715 000	2 213 000	2 362 000
% Urban	33.8	35.8	37.3
% Rural	66.2	64.3	62.7

Health status

Life expectancy at birth, 1990-1995 : 69.2 (males), 75.0 (females)

Infant mortality rate in 1990-1995 : 30 per 1000 live births

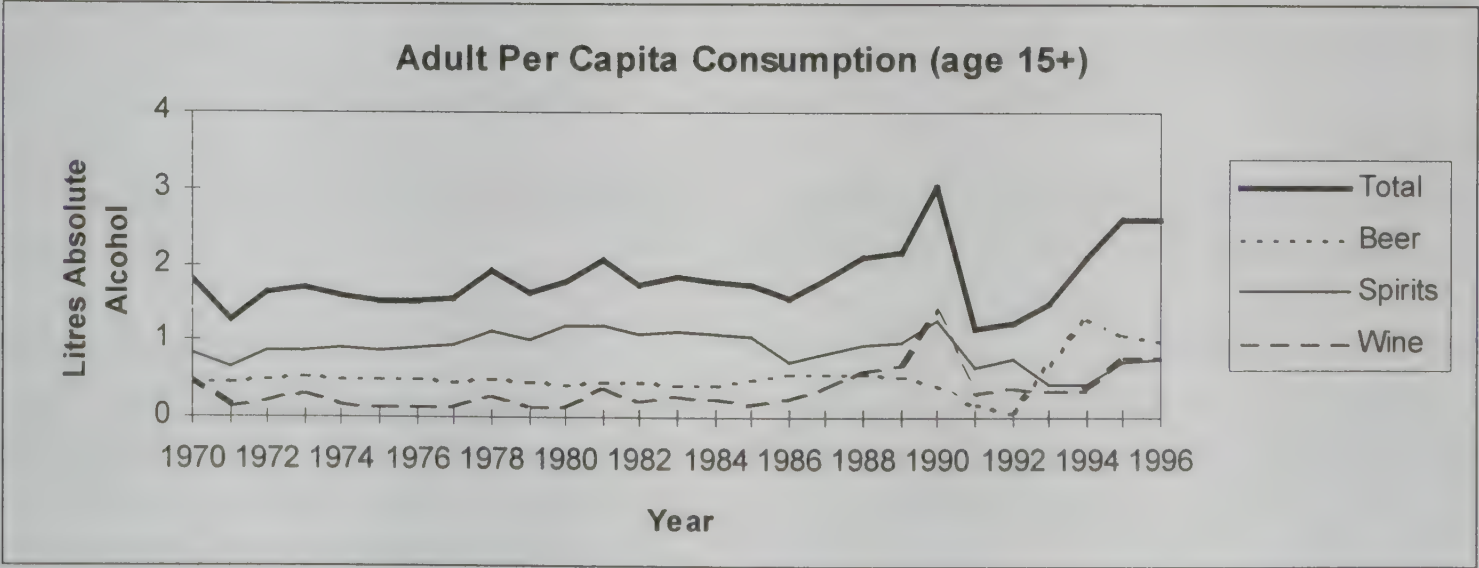
Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 56%; industry 19%; services 25%

Alcohol production, trade and industry

Albania produces modest amounts of wine and beer. Wine production has fallen in the 1990s. Beer production in the early 1990s was in the range of 100 000 hectolitres.

Alcohol consumption and prevalence



Consumption

Since 1990/1992 there has been a marked shift away from wine and spirits and towards beer in recorded consumption. This may be an indication of increased illegal or informal spirits and wine production and consumption.

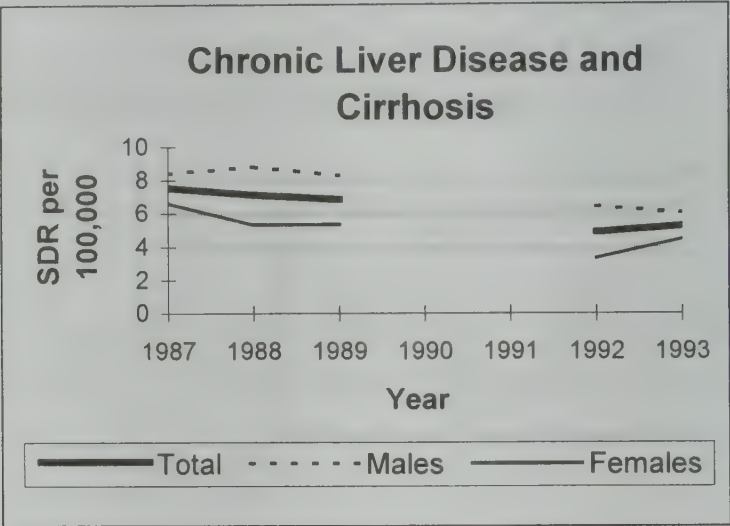
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of alcohol dependent patients in Tirana Hospital ranged between 30 and 40 annually between 1985 and 1994. Of these, women constituted less than one per cent of all inpatient admissions.

Mortality

The SDR for chronic liver disease and cirrhosis was about five per 100 000 population in the 1990s.



Alcohol policies

Control of alcohol problems

The BAC limit for drivers is 0.01 g%.

Armenia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 072 000	3 352 000	3 599 000
Adult (15+)	2 137 000	2 332 000	2 533 000
% Urban	65.7	67.5	68.7
% Rural	34.3	32.5	31.3

Health status

Life expectancy at birth, 1990-1995 : 69.5 (males), 75.5 (females)

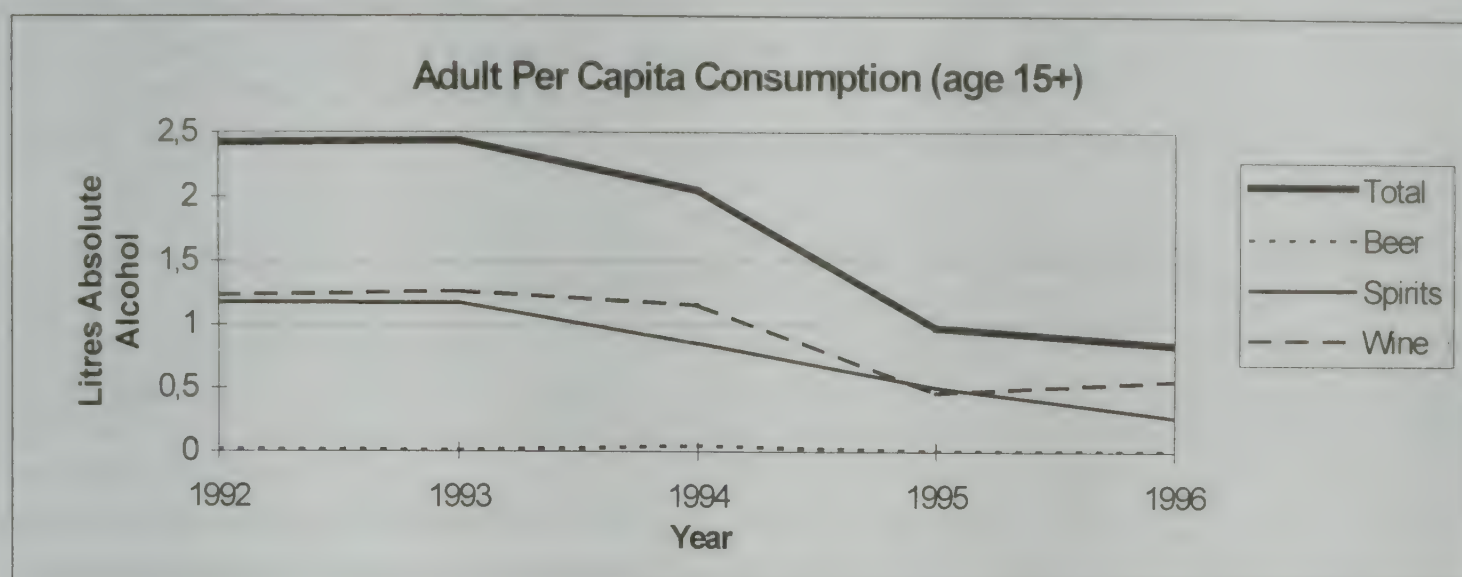
Infant mortality rate in 1990-1995 : 21 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 730, PPP estimates of GNP per capita (current int'l \$), 1995: 2260

Average distribution of labour force by sector, 1990-1992 : agriculture 11%; industry 32%; services 57%

Alcohol consumption and prevalence



Consumption

Beer statistics take an inexplicable plunge after 1991. WHO's European office estimated recorded consumption at 2.8 litres of pure alcohol per person in 1993, a figure slightly higher than that shown above. There is no information available for consumption of smuggled or home- or informally-produced alcohol.

Prevalence

An analysis of heavy drinkers showed that 57.2 per cent were manual workers, 18.9 per cent were peasants, 14.9 per cent were unemployed, 9.1 per cent were white collar workers and 0.1 per cent were retired.

Economic impact of alcohol

Consumer expenditure on alcoholic drinks, as a percentage of general expenditure on purchase of goods and payments for services, fell from 4 in 1990 to 1.7 in 1995.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate of admission to inpatient for alcoholic psychosis treatment was 2.3 per 100 000 population in 1993, a decrease from the 1991 and 1980 rates of about 5 per 100 000. These rates were calculated using the 1992 population statistics since population figures for earlier years were unavailable. The number of patients with alcoholic addiction registered at hospitals and other clinics at the end of the year was 4.5 per 100 000 population in 1991, down from 5.2 in 1990.

Mortality

The SDR for chronic liver disease was 15.3 per 100 000 population (all ages) in 1992, very similar to the 1991 rate.

Alcohol policies

Control of alcohol products

The real prices of all three types of alcoholic beverage i.e. beer, spirits and wine, have been increasing during the early 1990s. There is no maximum legal limit for the alcohol content of beverages. Labels for alcohol content are required by law.

Control of alcohol problems

There is no information available on the exact BAC limit permissible by law, but suspension of a driving licence is usual on conviction for an offence of exceeding the limit, and random alcohol breath testing is conducted frequently.

Alcohol data collection, research and treatment

There are no institutes that specialize in, or have major responsibility for, research on alcohol issues.

In the early 1990s developing specialized treatment for alcohol dependence and other alcohol problems became a high priority. The Republican Narcological Dispensary (RND) in Solerudnik is the national agency dealing with alcohol-related problems. Its activities include prevention, inpatient and outpatient treatment and follow-up, and provision of professional expertise in the area of intoxication and toxicological facilities. Apart from the RND, there is also a City Narcological Dispensary in Gyumri.

As a result of economic problems, the high cost of living, economic blockade, unemployment, geographical remoteness, and transport problems, alcohol dependent persons visit a physician or narcologist (a psychologist or psychiatrist who specializes in the treatment of addiction to alcohol or other drugs) only when suffering from such severe sequelae as psychosis, encephalopathy or polyneuritis. However, there has been an upward trend in the numbers presenting since the beginning of 1995 (twice the rate in 1994). Compared to other CIS countries, alcohol dependence is less of a major problem - there are no recorded examples of alcohol dependence among women or adolescents and there have not been, nor are there, any "sobering up" stations found elsewhere in the region.

Austria

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	7 549 000	7 705 000	7 968 000
Adult (15+)	6 007 000	6 364 000	6 549 000
% Urban	54.8	55.4	55.5
% Rural	45.2	44.6	44.5

Health status

Life expectancy at birth, 1990-1995 : 73.0 (males), 79.2 (females)
Infant mortality rate in 1990-1995 : 7 per 1000 live births

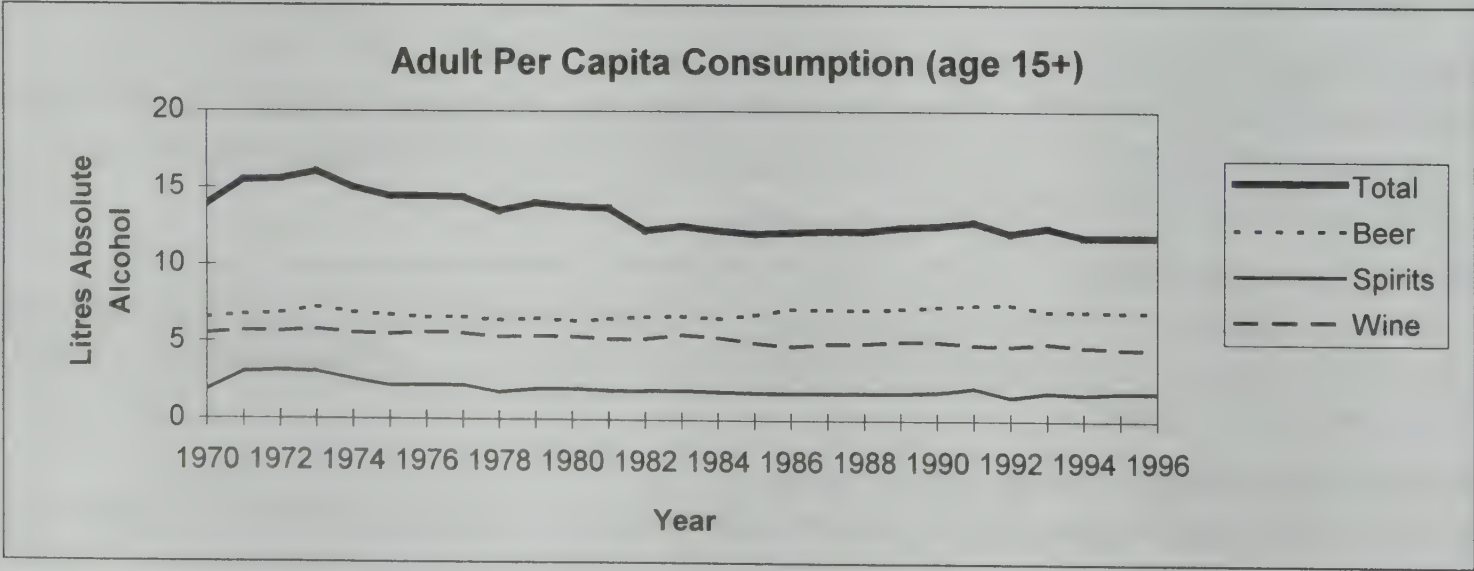
Socioeconomic situation

GNP per capita (US\$), 1995 : 26 890, PPP estimate of GNP per capita (current int'l \$) : \$21 250
Average distribution of labour force by sector, 1990-1992 : agriculture 7%; industry 37%; services 56%
Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Austria produces beer, distilled spirits and wine. The country's leading brands include Stock Brandy, Spitz Brandy and Eristoff Vodka. Just three spirits types i.e. brandy (non-cognac), rum and liqueurs currently account for nearly two-thirds of Austrian consumption.

Alcohol consumption and prevalence



Consumption

The alcoholic beverages of choice are beer and wine. Pear, apple and grape ciders reportedly account for six per cent of all absolute alcohol consumed, and are not reflected in the graph above.

Prevalence

A 1994 survey of a representative sample of 2000 Austrians aged 16 to 99 years showed that 16.2 per cent of the entire population (28.8 per cent of males and 4.3 per cent of females) consume an average of 60 grams alcohol per day or more, and 24.3 per cent (41 per cent of males and 8.5 per cent of females) consume an average of 40 grams per day. A study carried out in 1985 among a representative sample of 2044 people aged 15 to 40 years found that 11.5 per cent drank daily, 33 per cent drank more than 60 grams pure alcohol daily, and 16 per cent abstained completely from alcohol.

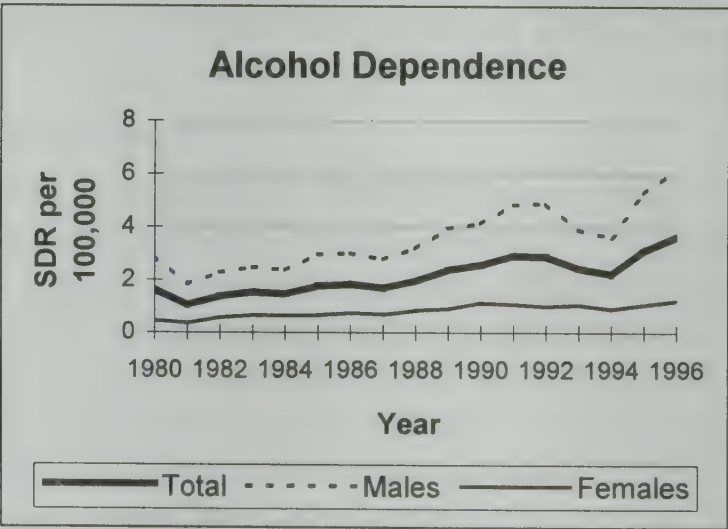
Age Patterns

In 1994 a survey of more than 3000 15 year old students found that of boys, 79.3 per cent had tried alcoholic beverages and 52.4 per cent had drunk alcoholic beverages more than 10 times in ninth grade. Of girls, 78.6 per cent had tried alcoholic beverages, and 43.1 per cent had drunk alcoholic beverages more than 10 times in ninth grade. A 1993/1994 WHO study among 15 year old boys and girls showed that 96.2 per cent of boys had tried alcoholic beverages, 40.2 per cent drank alcoholic beverages at least weekly and 45.6 per cent had been drunk at least twice. Of girls, 94.6 per cent had tried alcoholic beverages, 24.9 per cent drank alcoholic beverages at least weekly and 30.4 per cent had been drunk at least twice.

Mortality, morbidity, health and social problems from alcohol use

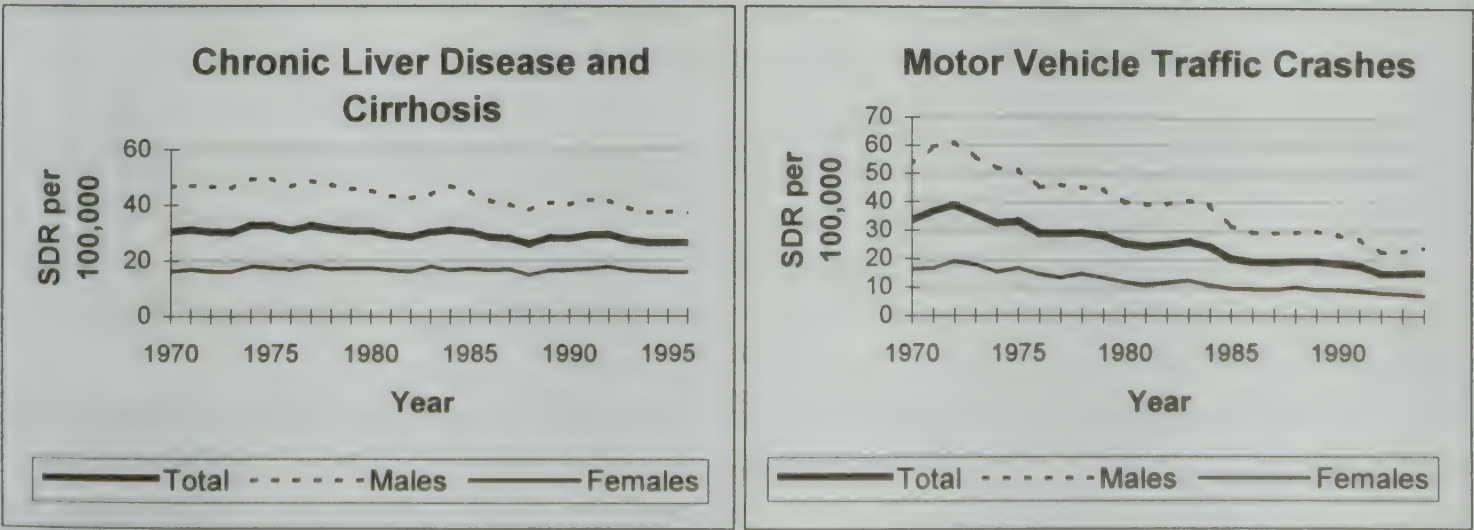
Alcohol dependence and related disorders

The number of people per 100 000 population treated in hospitals for alcoholic psychosis decreased from 29.7 to 24.2 between 1990 and 1993. However, the SDR per 100 000 population for alcohol dependence has been rising during the late 1990s.



Mortality

The SDR per 100 000 population for chronic liver disease decreased from 29.2 to 25.9 between 1980 and 1993.



Social problems

The number of people killed in motor vehicle accidents related to alcohol was 118 in 1993, compared to 245 in 1980, giving death rates per 100 000 population of 1.5 and 3.2 respectively. The total rate per 100 000 population of road traffic accidents involving alcohol was 38.9 in 1992, a marginal decrease on the 1990 figure, but a more substantial decrease on the 49.7 recorded in 1985.

Alcohol policies***Control of alcohol products***

Table wines are taxed US\$ 0.12 per litre, sparkling wine is taxed US\$ 1.60 or US\$ 3.20 per litre, beer (four to six per cent alcohol) is taxed US\$ 0.22 per litre and spirits (over 35 per cent alcohol) are taxed US\$ 4.90 per litre of pure alcohol. Farmers are allowed to produce quite a high amount for private consumption tax free. Small farmers selling their products themselves pay a 10 per cent value added tax (VAT) while all others pay a 20 per cent VAT. If a product is sold in a restaurant or shop, there is a special drink tax amounting to 10 per cent. The real price of wine has decreased by about five per cent and the prices of spirits and beer have increased by about five per cent during the early 1990s.

There are no special restrictions on hours, days of sale, type or location of alcohol outlets. State authorities must be informed and a licence must be procured giving permission to produce alcohol as well as indicating how much may be produced. For the production, sale and trade of any alcohol product a license is required.

Restrictions on the advertising of beer, spirits and wine are implemented by means of a voluntary code. General and specific health warnings are not required by law. There is no maximum legal limit for alcohol content but there are regulations governing the maximum limit for different types of beverages. Rum of up to 80 per cent proof may be bought, but the sale of whiskey of 80 per cent is not allowed. However, alcoholic beverages may be sold mixed with pure alcohol amounting to more than 80 per cent proof, provided it is marketed under a specific name, such as "hard" whiskey. Labels for alcohol content are required by law.

There is no minimum legal age limit for buying or drinking alcohol, but in all nine federal states the age limit for drinking spirits in public (and for visiting bars) is 18 years.

Control of alcohol problems

In eight federal states the minimum legal age limit for drinking wine and beer in public (which includes drinking in a restaurant) is 16 years; in one federal state (Lower Austria) it is 15 years. For motor vehicle drivers, a BAC limit of 0.05 g% was introduced in Austria on 1 January, 1998. A driver with a BAC of between 0.05 g% and 0.08 g% may receive a fine of between £140 (US\$ 11.18) and £2400 (US\$ 191.75). A repeat offence at this level within a year results in a confiscation of a driver's licence for three weeks. Imprisonment is usually considered only in cases of accidents where people have been injured or killed. Random alcohol breath testing was introduced in early 1995.

There are no national agencies specifically responsible for the prevention of alcohol problems, but it is included in the work of the Department of Sport and Consumer Protection within the Ministry of Health and in the Medical Service within the Ministry of Education and Arts. The Ministry of Interior (police) is also active in providing school-based information. All local inpatient and outpatient treatment centres for alcohol and drugs devote some of their time to informing teachers, students, and parents as well as the interested public about alcohol and drugs. A ten hour curriculum on alcohol, tobacco, medical and illicit drugs has been developed for schools.

Alcohol data collection, research and treatment

The Department of Public Health has an Advisory Council on Combating Addiction to Alcohol and Other Drugs which advises the Minister of Health, and a Co-ordination Agency for Addiction Problems. There is no national agency responsible for collecting all alcohol data, but the Ludwig-Boltzmann Institute for Addiction Research will be commissioned by the Ministry of Health to collect all alcohol-relevant statistics and survey results in a brochure.

Courses on alcohol dependence are provided in the framework of undergraduate training in medicine and psychology and within the education for social workers. Students of psychology and social work are given the opportunity to do several weeks of practical work in appropriate institutions. Lectures

and seminars are organized by professional organizations, such as the Medical Society, for the continuing training of the professions concerned.

The number of treatment facilities and specialized staff has grown nationwide since 1980, as have the temperance movement and organizations such as Blue Cross, Good Templars, and Alcoholics Anonymous. A broad network of outpatient services provides a full range of treatment and rehabilitation services. Help is available through treatment centres, family and youth counselling centres and self-help groups, but this is not organized nationally.

Azerbaijan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 157 000	7 117 000	7 558 000
Adult (15+)	4 029 000	4 759 000	5 151 000
% Urban	52.8	54.4	55.8
% Rural	47.2	45.6	44.2

Health status

Life expectancy at birth, 1990-1995 : 66.5 (males), 74.5 (females)

Infant mortality rate in 1990-1995 : 28 per 1000 live births

Socioeconomic situation

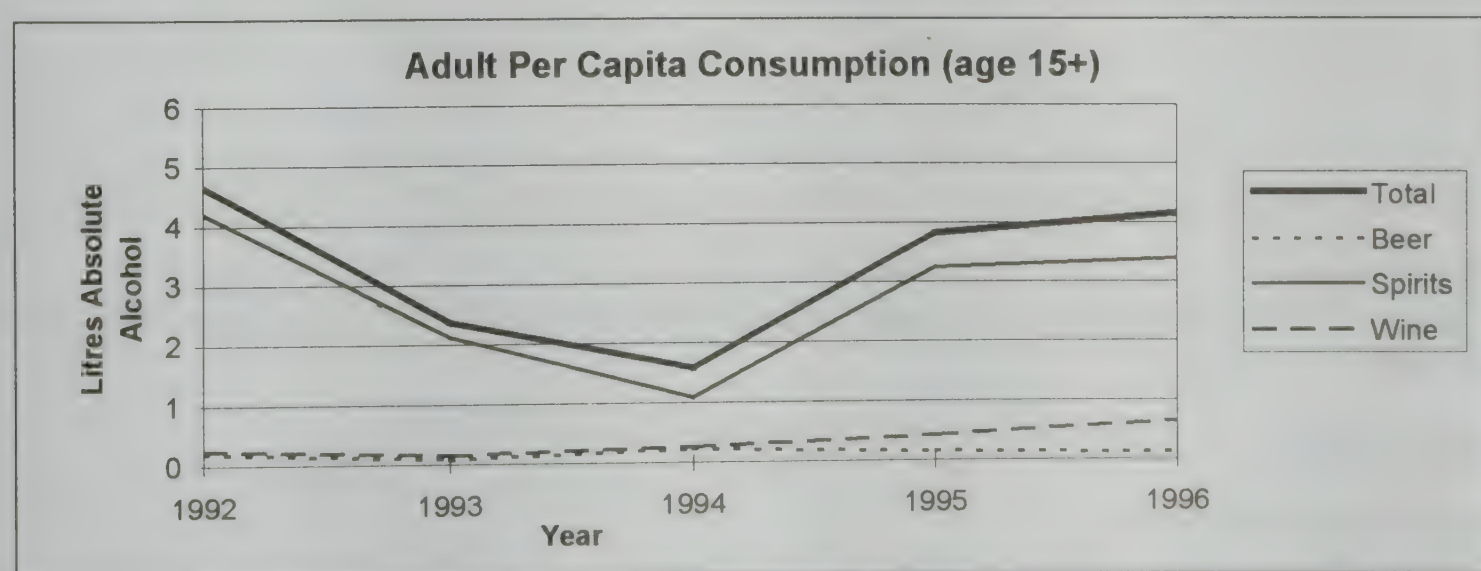
GNP per capita (US\$), 1995: 480, PPP estimates of GNP per capita (current int'l \$), 1995: 1460

Average distribution of labour force by sector, 1990-1992 : agriculture 15%; industry 21%; services 64%

Alcohol production, trade and industry

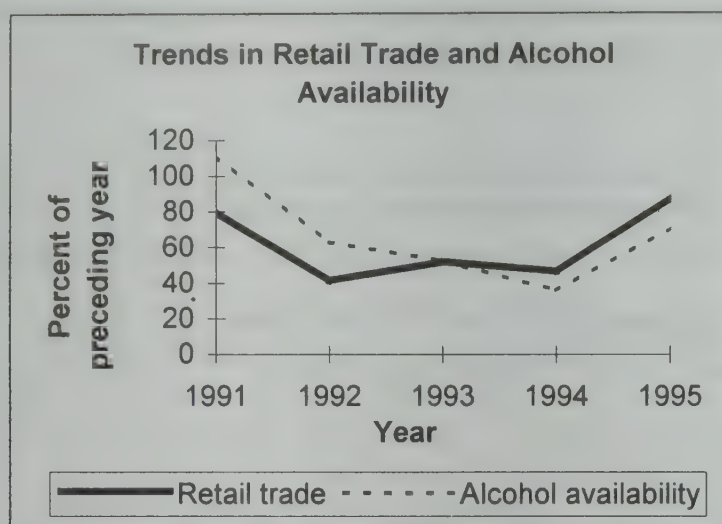
A new plant for production of pure alcohol was to be launched in December, 1997. The new enterprise will be capable of manufacturing 20 million litres of alcohol per year. Currently, the leading wine manufacturer in Baku is capable of manufacturing 22 million litres of vodka annually. In 1996, 16 million litres of alcohol was imported from Ukraine to cover the existing demand. With the creation of the new enterprise, alcohol imports will be postponed and Azerbaijan will completely service the demand of the domestic market.

Alcohol consumption and prevalence



Consumption

Figures obtained directly from Azerbaijan indicate that alcohol availability was declining until 1994. Immediately after Azerbaijan became independent, alcohol availability diminished more slowly than the overall decline in retail trade, but has expanded again at a lower rate when compared to retail trade since 1994.



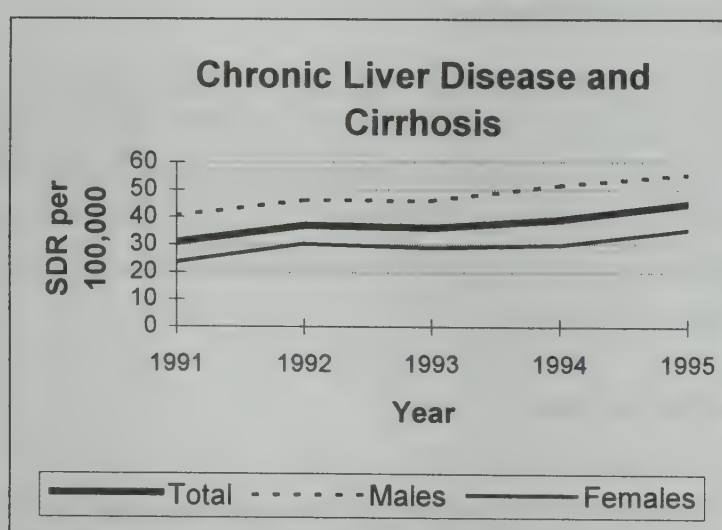
Economic impact of alcohol

Consumer expenditure on alcoholic beverages as a percentage of total expenditure decreased from 1.3 in 1990 to 0.9 in 1995.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate of admission per 100 000 population to inpatient treatment for alcoholic psychosis was 8.2 in 1993, an increase from the 3.2 recorded in 1990. The number per 100 000 population of patients with alcoholic dependence registered at hospitals and other clinics (at the end of the year) rose from 16.4 in 1990 to 16.7 in 1995.



Mortality

The SDR per 100 000 population for chronic liver disease was 33 in 1993, and 33.1 in 1992.

Social problems

The number of persons committing crimes under the influence of alcohol rose from 1000 in 1990 to 1200 in 1995.

Alcohol policies

Control of alcohol products

Real prices of beer, spirits and wine have been increasing during the last five years. There is a tax on spirits. There are no restrictions on the sale of alcoholic beverages. There is no state monopoly and no licence is required for the production and distribution of alcoholic beverages. There is no minimum legal age limit for buying alcohol, and there are no restrictions on advertising of alcoholic

beverages. General or specific health warnings are not required by law. Labels for alcohol content are not required by law, and there is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

Priorities of the early 1990s have been reducing availability and using price policy to reduce demand. Religious leaders are involved in spreading messages on reducing substance use. There is no national agency for the prevention of alcohol problems.

The BAC limit is 0.0 g% for drivers. Random alcohol breath testing is not carried out.

Belarus

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 627 000	10 212 000	10 141 000
Adult (15+)	7 425 000	7 856 000	7 948 000
% Urban	56.5	66.8	71.2
% Rural	43.5	33.2	28.9

Health status

Life expectancy at birth, 1990-1995 : 64.5 (males), 75.1 (females)

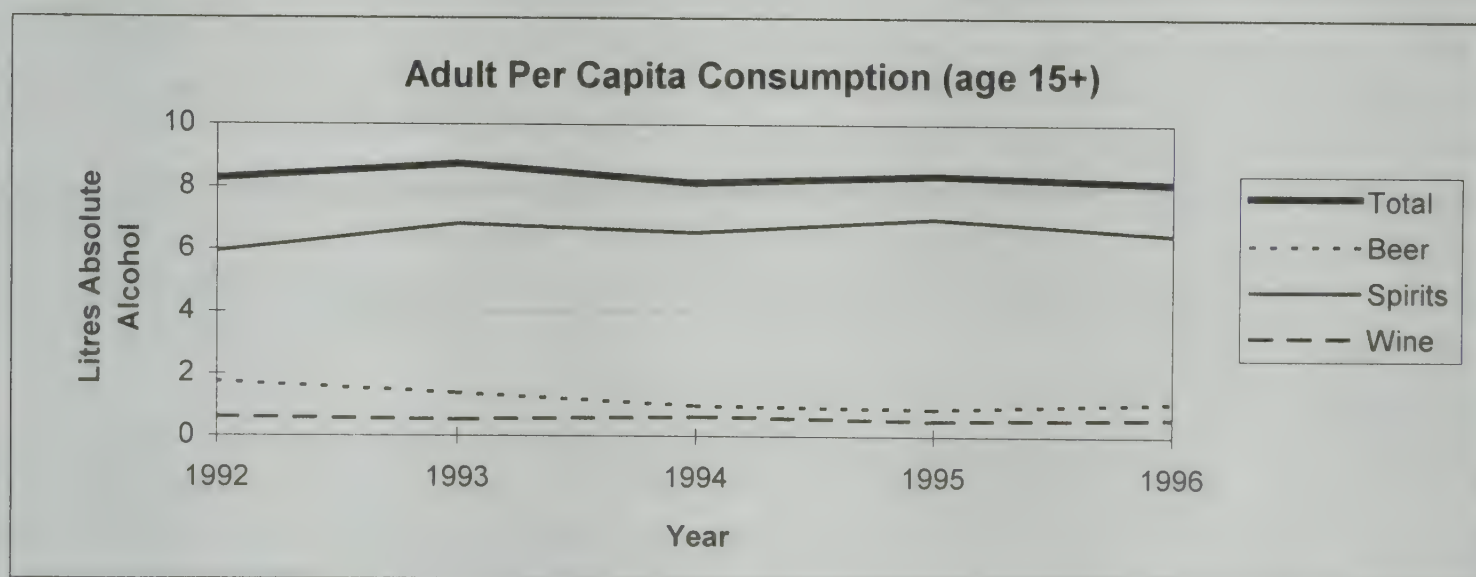
Infant mortality rate in 1990-1995 : 17 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2070, PPP estimates of GNP per capita (current int'l \$), 1995: 4220.

Average distribution of labour force by sector, 1990 : agriculture 20%, industry 40%

Alcohol consumption and prevalence



Consumption

Spirits is the alcoholic beverage of choice by a wide margin. There are no data available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Prevalence

It is estimated that approximately 10 per cent of the population drinks heavily.

Economic impact of alcohol

Consumer expenditure on alcoholic beverages, as a percentage of general expenditure on purchase of goods and payments for services, decreased from 7.4 in 1990 to 3.3 in 1995.

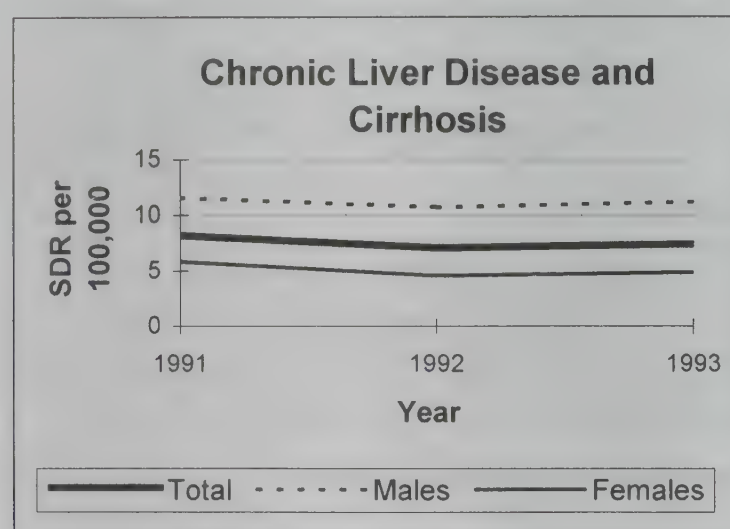
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number (per 100 000 population) of patients registered during the year with alcoholic dependence at hospitals and other clinics increased from 11 in 1990 to 13.5 in 1995.

Mortality

The SDR per 100 000 population for chronic liver disease was 7.7 in 1994, compared to 8 in 1980 and about 6 in 1987.



Social problems

The number of persons committing crimes under the influence of alcohol (thousands) rose from 15 in 1990 to 22.1 in 1995.

Alcohol policies

Control of alcohol products

The real price of all three types of alcoholic beverage, i.e. beer, spirits and wine has remained stable during the past five years. In 1995 a law of the Republic of Belarus imposed the following taxes on alcoholic beverages: spirits and vodka, 75 per cent; sparkling wine, 45 per cent; beer, 40 per cent.

There are no restrictions on hours or days of sale of alcoholic beverages. There is a state monopoly for the production of beer, wine and spirits. There is no state monopoly for distribution but a licence is required for all three types of alcoholic beverage.

The advertising of all three types of alcoholic beverages has been restricted since 1993, though alcohol advertising can be widely seen on foreign television channels. Labels for alcohol content are required by law. There is no maximum legal limit for the alcohol content of beverages. General and specific health warnings are not required.

Control of alcohol problems

The use of alcohol is forbidden in work places. There is an minimum legal age limit of 21 for buying alcoholic beverages. The BAC limit is 0.04 g% for drivers. Suspension of driving licence is usual upon conviction for a first offence of driving above the permitted BAC. Upon conviction for a second or subsequent offence, suspension or imprisonment is usual. Random alcohol breath testing is carried out frequently.

There is no government agency devoted specifically to alcohol issues, but it is included in the work of the Belorussian Republican Centre of Health in Minsk. There are seven regional Centres of Health in Belarus.

Alcohol data collection, research and treatment

The Narcology Laboratory of the Medical Institute is a research institute which specializes in, and has major responsibility for, research on alcohol issues. The Ministry of Statistics and Analysis is responsible for collating, analysing, and disseminating data, and using it as a basis for national policies.

Priorities in the 1990s have been to develop specialized treatment for alcohol dependence and other alcohol problems. Alcoholics Anonymous is also available. Alcohol dependence treatment expanded in the 1980s, but has contracted during the 1990s when measured both by numbers of persons in treatment, and by numbers of physicians working in the field, as the chart below shows:

	1980	1985	1990	1993
Persons in inpatient treatment	91 575	135 675	108 450	90 150
Persons in outpatient treatment	20 732	36 523	26 406	20 632
Physicians offering treatment services	106	217	312	248

Belgium

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 852 000	9 951 000	10 113 000
Adult (15+)	7 867 000	8 145 000	8 306 000
% Urban	95.4	96.5	97.0
% Rural	4.6	3.5	3.0

Health status

Life expectancy at birth, 1990-1995 : 73.1 (males), 79.8 (females)

Infant mortality rate in 1990-1995 : 6 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 24 170, PPP estimates of GNP per capita (current int'l \$), 1995: 21 660

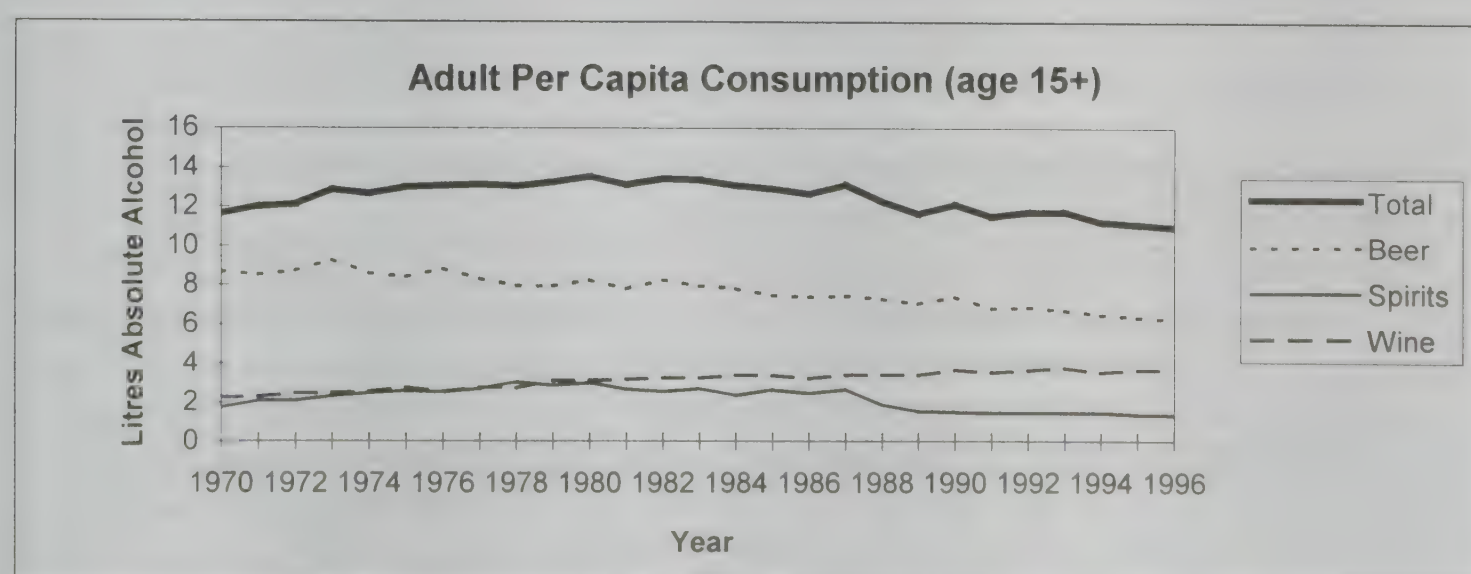
Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 28%; services 69%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Belgium produces beer, wine and spirits. Belgium's Interbrew NV was the world's fourth largest brewer in 1996. Interbrew's share of the Belgian market remained steady at 56 per cent.

Alcohol consumption and prevalence



Consumption

There is no quantified information available on unrecorded consumption. Beer is the beverage of choice, although wine consumption has been rising in recent years.

Prevalence

A 1990 survey of a sample of those over 15 years of age found that 19 per cent were frequent consumers of alcohol (at least three days a week), 36 per cent were moderate consumers and 45 per cent were infrequent consumers (less than weekly or never).

Age patterns

A survey among a representative sample of 1820 students, aged 14 to 24, in Limburg found that 19 per cent never drank alcoholic beverages, 28.2 per cent drank at least weekly, 7 per cent drank three or more glasses a day, 36 per cent had been drunk several times and 10 per cent became drunk regularly.

A dozen epidemiological studies of drinking patterns were carried out between 1961 and 1984. It was found that the age at which young people first come in contact with alcohol has sharply declined over the years. Working youths consume more alcohol than students of the same age group. There are also notable regional and sub-regional differences in drinking patterns (linked, for example, with the degree of urbanization).

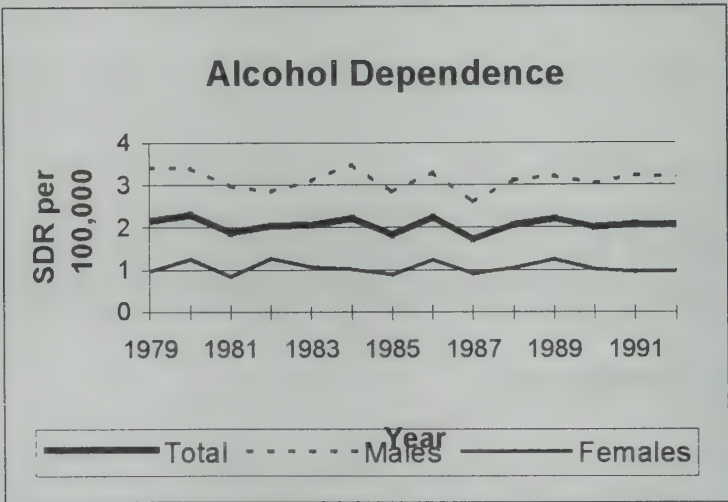
Economic impact of alcohol

About three per cent of household expenditure was used for alcoholic beverages in the 1980s. Approximately 8000 people were employed in the alcohol industry in 1978 and about 3.4 per cent of the employed population were engaged in production and distribution of alcoholic beverages in 1977.

Mortality, morbidity, health and social problems from alcohol use

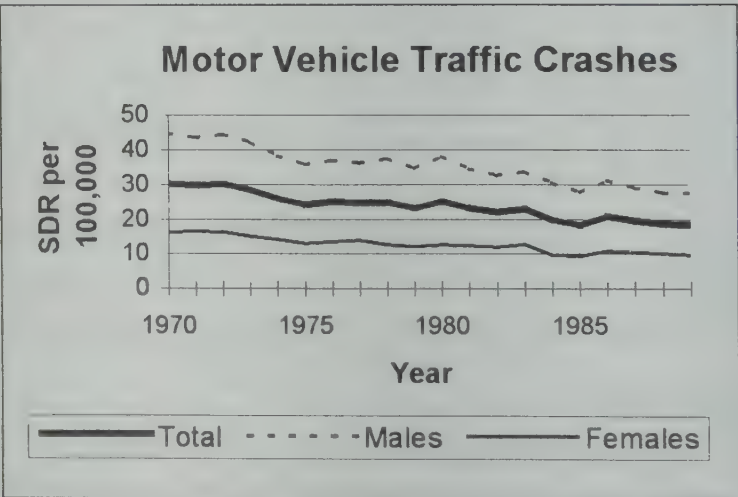
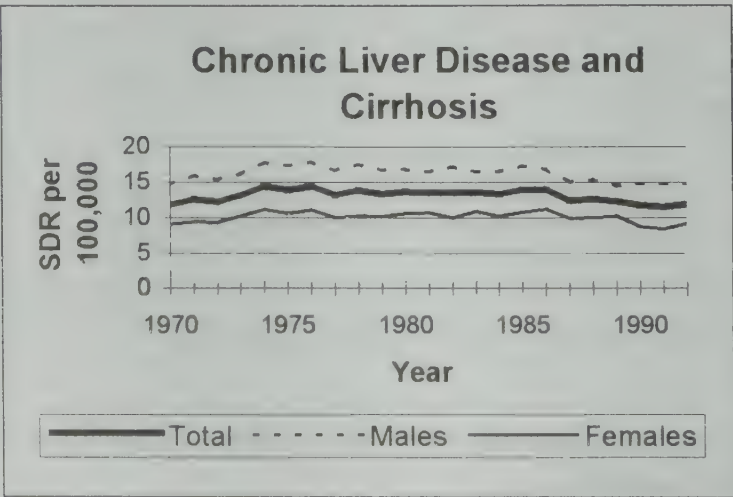
Alcohol dependence and related disorders

The Institute of Hygiene and Epidemiology in Brussels requested a national sample of general practitioners to record, in 1983-1984, the number of contacts for alcohol problems during a period of 15 months. It was found that 1267 contacts (1.3 per 1000 total contacts or 10.2 per practitioner) were for alcohol problems. The Ministry of Health conducted a one-day prevalence study of alcohol-related and drug-related problems in all the health services in June 1986. Of all inpatients, 12 per cent of those in psychiatric hospitals, eight per cent in psychiatric units of general hospitals, and three per cent of those in general hospitals had problems related to psychoactive substances.



Mortality

SDR for chronic liver disease and cirrhosis per 100 000 population in 1992 was 11.84. Rates are approximately 50 per cent higher for men than for women.



Social problems

The number of alcohol-related motor vehicle traffic crashes per 100 000 population decreased from 18.3 to 10.9 between 1985 and 1992. Criminal offences connected with drunkenness comprised 8 per cent to nearly 14 per cent of all criminal offences between 1970 and 1978, with a peak in 1977.

Alcohol policies***Control of alcohol products***

The trends in real prices of wine and spirits have been stable and the real price of beer has been increasing during the early 1990s. Taxation as a percentage of price is not available. Non-sparkling wines are taxed 1471 Bfr/hl (US\$ 40.10/hl) and sparkling wines are taxed 5149 Bfr/hl (US\$ 140.40/hl). Wines with less than 8.5 per cent alcohol are not taxed. Ethyl alcohol (spirits) are subject to pure alcohol taxes adjusted to the alcohol percentage of the liquor.

Under the General Regulations on Labour Protection there is a ban on bringing distilled alcoholic beverages and fermented drinks with an alcohol content of more than six per cent into workplaces and associated locations. There is no state monopoly for production or distribution of alcohol, and a licence is not required.

General and specific health warnings are not required. There is a voluntary code restricting advertising of spirits and beer on TV, in print, on the radio or on billboards. The code does not include table wine. Labels for alcohol content are required by law. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcohol. The BAC limit is 0.05 g% for drivers, being reduced from 0.08 g% in December 1994. On conviction for a first offence of driving above the permitted BAC, suspension of driving licence, generally for a few hours, is a usual penalty. In the case of subsequent offences, suspension for a longer period is usual with the eventual possibility of imprisonment.

A comprehensive action plan for information, education and action on alcohol problems has been established by two regional organizations. Special emphasis is given to young people and health education. Annual education weeks are also organized. There are national school-based and workplace programmes that deal with alcohol and other substances.

Alcohol data collection, research and treatment

The Vereniging voor Alcohol- en andere Drugproblemen (VAD) collects and analyses data for the Flemish community through the Ministry of Economic Affairs, the National Institute for Statistics and the Confederation of Belgian Breweries. These data are used as a basis for national policies. The VAD makes an annual review of relevant surveys and an inventory of prevention activities.

Each linguistic community (Flemish, French and German) has an agency for the prevention of alcohol problems. The agencies are involved in the coordination of local prevention workers, development of programmes and strategies, organizing training programmes for key-figures and operating a drug hot-line. The centres also have a documentation function.

The Flemish community has 10 mental health centres, each of which employs a prevention worker who has a regional coordination function. In each of the nine provinces, at least one specialized residential service (mostly a specialized unit of a psychiatric hospital) is available as well as one or two specialized outpatient services (generally in the context of a community mental health centre). More than 100 specific self-help groups are in operation in the whole country. There are a number of active voluntary organizations such as Alcoholics Anonymous, Blue Cross, Gold Cross and the International Organization of Good Templars. Several of these bodies have a religious affiliation. They provide assistance of various kinds, including some advisory services and clinics. Self-help groups like Al-Anon, Al-a-teen and Trefpunt Zelfhulp are also active. Some treatment centres have family groups. Alcoholics Anonymous groups arrange information evenings for the public and professionals.

Bosnia and Herzegovina

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 914 000	4 308 000	3 459 000
Adult (15+)	2 847 000	3 280 000	2 691 000
% Urban	35.5	44.6	49.0
% Rural	64.5	55.4	51.0

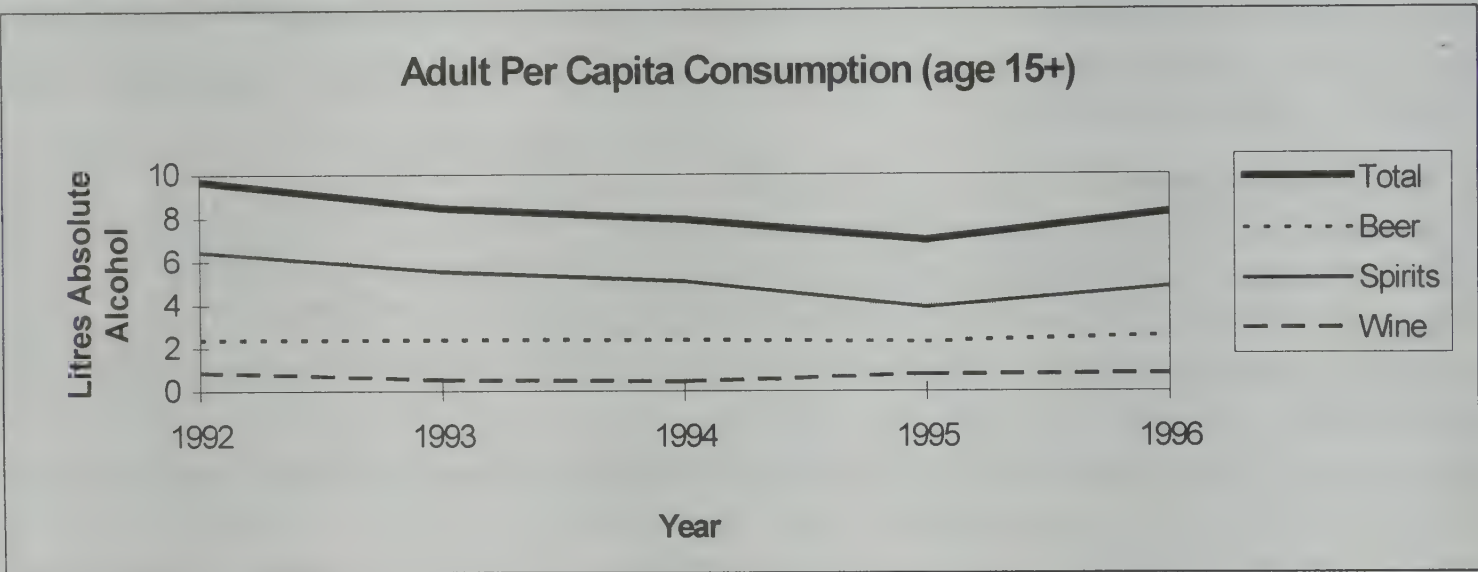
Health status

Life expectancy at birth, 1990-1995 : 69.6 (males), 75.1 (females)

Infant mortality rate in 1990-1995 : 15 per 1000 live births

Alcohol production, trade and industry

Bosnia and Herzegovina produce beer, distilled spirits and wine.



Alcohol consumption and prevalence

Consumption

Distilled spirits are the alcoholic beverage of choice among adults. There are no data available regarding consumption of smuggled or home- or informally-produced alcohol.

Bulgaria

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 862 000	8 891 000	8 769 000
Adult (15+)	6 901 000	7 153 000	7 160 000
% Urban	61.2	67.7	70.7
% Rural	38.8	32.3	29.3

Health status

Life expectancy at birth, 1990-1995 : 67.8 (males), 74.9 (females)

Infant mortality rate in 1990-1995 : 14 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1330, PPP estimates of GNP per capita (current int'l \$), 1995: 4480

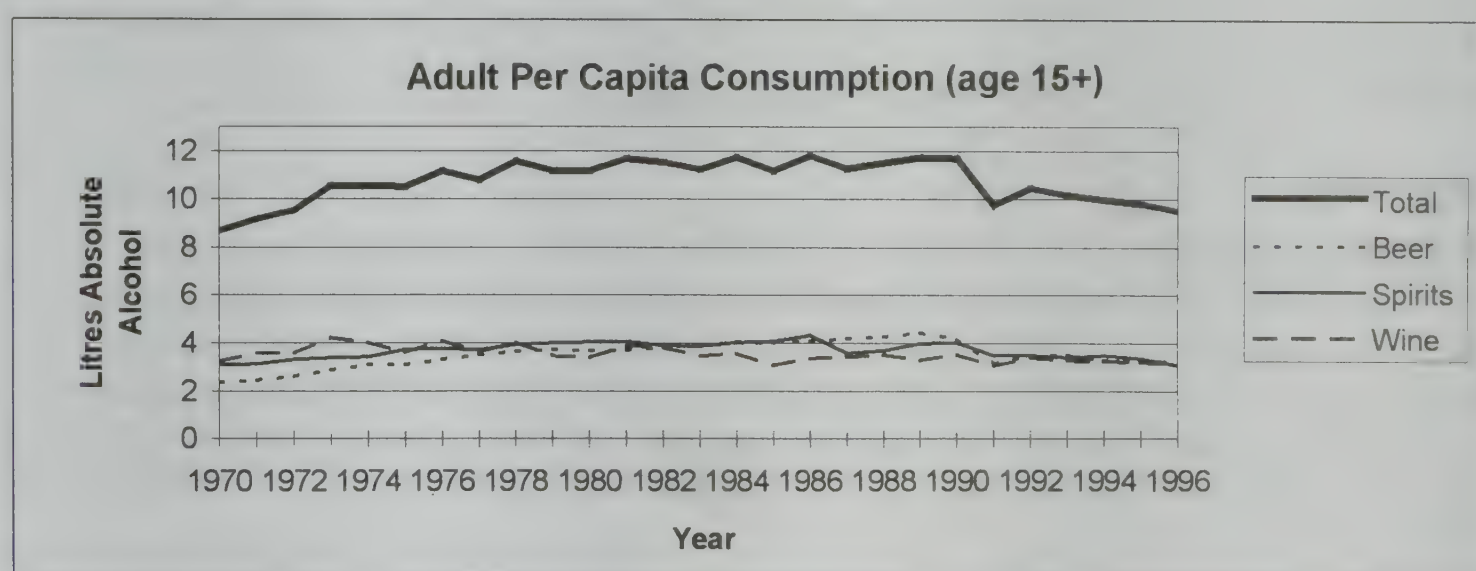
Average distribution of labour force by sector, 1990-1992 : agriculture 17%; industry 38%; services 45%

Adult literacy rate (per cent), 1995 : N/A

Alcohol production, trade and industry

Privatization of formerly state-owned breweries is proceeding. The state-owned Zagorka Brewery, which produces about 80 million litres of beer per year, was bought by Heineken's Athenian Brewery SA and Leventis Group's Hellenic Bottling group (who together created Brewinvest SA) in 1994. In 1995, Belgium-based Interbrew acquired 70 per cent of Bulgaria's Kamenitsa Brewery.

Alcohol consumption and prevalence



Consumption

In the early 1990s unrecorded imports, untaxed sales and other illegal sales of alcohol increased greatly and became a significant part of total alcohol consumption. Traditionally home-produced alcohol has also accounted for a sizeable percentage of consumption. An important new trend is the illegal production of highly toxic alcohol using well-known Bulgarian and import trade marks.

Prevalence

In a 1992 study carried out in Burgas County among adults aged up to 30 years, 50 per cent were found to be abstinent, 14 per cent were abusers and 2 per cent were alcohol dependents.

Age patterns

In a 1993 survey in four cities of 14 to 18 year olds, 77 per cent were alcohol drinkers and 6 to 7 per cent drank often. One per cent drank daily and 1.2 percent were dependent on alcohol. The average age of first use ranged from 13 to 16 years old. In the same year, a WHO sponsored pilot study of 99 students aged 14 to 18 years in Sofia found that two-thirds drank alcohol and one-fifth drank regularly. Another one-fifth had increased their consumption recently. One-third disapproved of drinking alcohol.

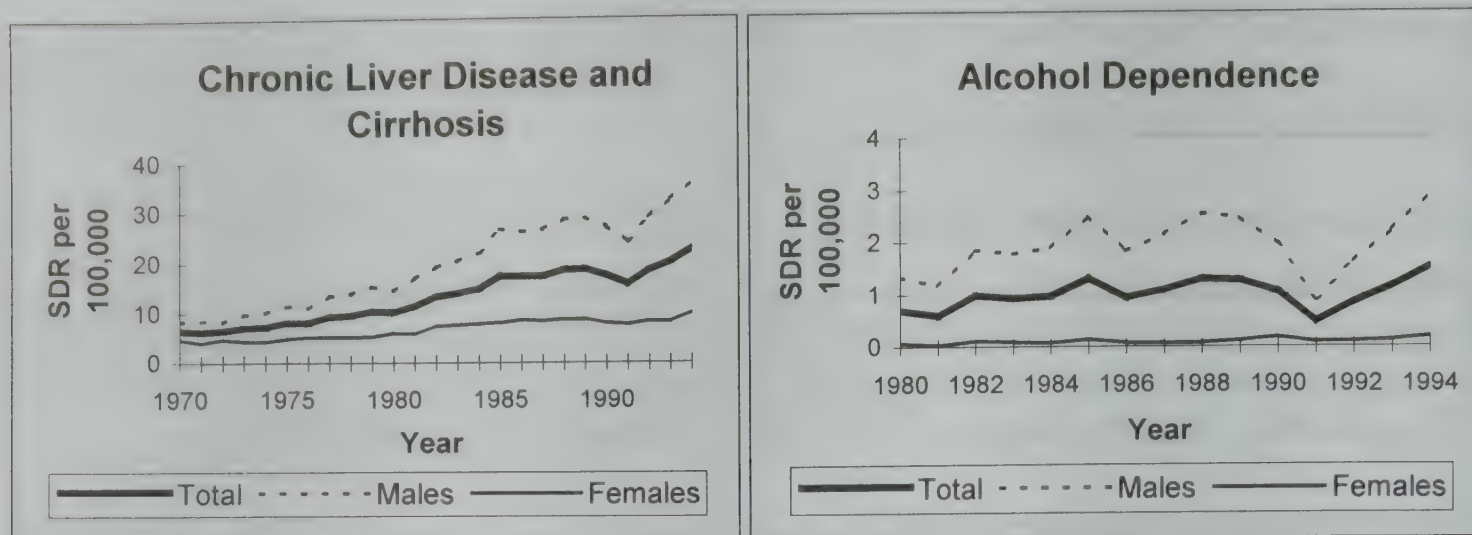
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In a 1986 survey, 31 per cent of males and 3 per cent of females showed signs of alcohol abuse. The rate (per 100 000 population) of inpatient admissions for alcoholic psychosis increased from 12 in 1980 to 18.2 in 1985, then decreased to 8.8 in 1991 and rose again to 12.9 in 1992.

Mortality

The SDR per 100 000 for both chronic liver disease and cirrhosis and for alcohol dependence rose sharply in the early 1990s.



Social Problems

In 1986, 30 per cent of traffic crashes were alcohol-related.

Alcohol policies

Control of alcohol products

The real price of beer, spirits and wine increased during the early 1990s. Table wines are taxed 18 per cent, beer (four to six per cent proof) is taxed 18 per cent, spirits (over 35 per cent proof) are taxed 18 per cent. The former state monopoly on alcohol production and trade has been relaxed. There is a ban on sales to minors (under 18 years of age), people in a state of intoxication, and automobile drivers on the road. The use of alcoholic beverages is forbidden on public transport and in discos and clubs for teenagers.

The advertising of alcoholic beverages is banned on television and radio, in newspapers and magazines and in cinemas. However these bans are not effectively enforced. There are no advertising restrictions on billboards. Labels for alcohol content are required by law.

Control of alcohol problems

The National Centre for Addictions in Sofia, Suhodol, is the national agency dealing with the prevention and treatment of alcohol problems. There is a regional centre in Varna. The main activities of Suhodol are prevention, including provision of information and education programmes, public relations and research. There are also school-based programmes that deal with alcohol and other substances. The highest coordinating body is the State Council, and other agencies such as the National Temperance Committee and the Ministry of Public Health analyze available information and develop norms. The BAC limit is 0.02 g%. A conviction for driving above the BAC limit does not usually lead to imprisonment or suspension from driving. Random alcohol breath testing is carried out infrequently.

A 1976 Order of the Medical Academy prescribed the organization of postgraduate courses and the inclusion of alcohol-related topics in undergraduate training. Postgraduate courses of two weeks to six months are being given for general practitioners and other medical and non-medical personnel in dealing with alcohol problems. The subject of abuse of psychoactive substances is taught in a 60-hour course at the University of Sofia.

Alcohol data collection, research and treatment

In the 1980s attention was given to groups considered to be at high risk for alcohol-related problems. In each of the districts in the country there is a psychiatric dispensary with an outpatient service whose task is registration, follow-up, monitoring and help for alcohol and drug abusers. Case finding is carried out with the assistance of primary health services. There are four specialized substance dependence hospitals, one being the University Department for Alcoholism in Sudohol. They have a total of 470 beds, and there are an additional 250 beds in alcohol dependence wards in six specialized psychiatric hospitals. There is emphasis on early diagnosis and treatment at the primary health care level, with the provision of advice and monitoring. The family is involved to some extent, but this is better developed in the outpatient alcohol clinics.

Research into alcohol problems is initiated by the state. However, there is no stable coordination of efforts, activities and action. The National Statistical Institute and the National Centre for Addictions collect, analyze and utilize data for national policies.

Croatia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 377 000	4 517 000	4 495 000
Adult (15+)	3 454 000	3 591 000	3 638 000
% Urban	50.1	59.8	64.4
% Rural	49.9	40.2	35.6

Health status

Life expectancy at birth, 1990-1995 : 67.1 (males), 75.7 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

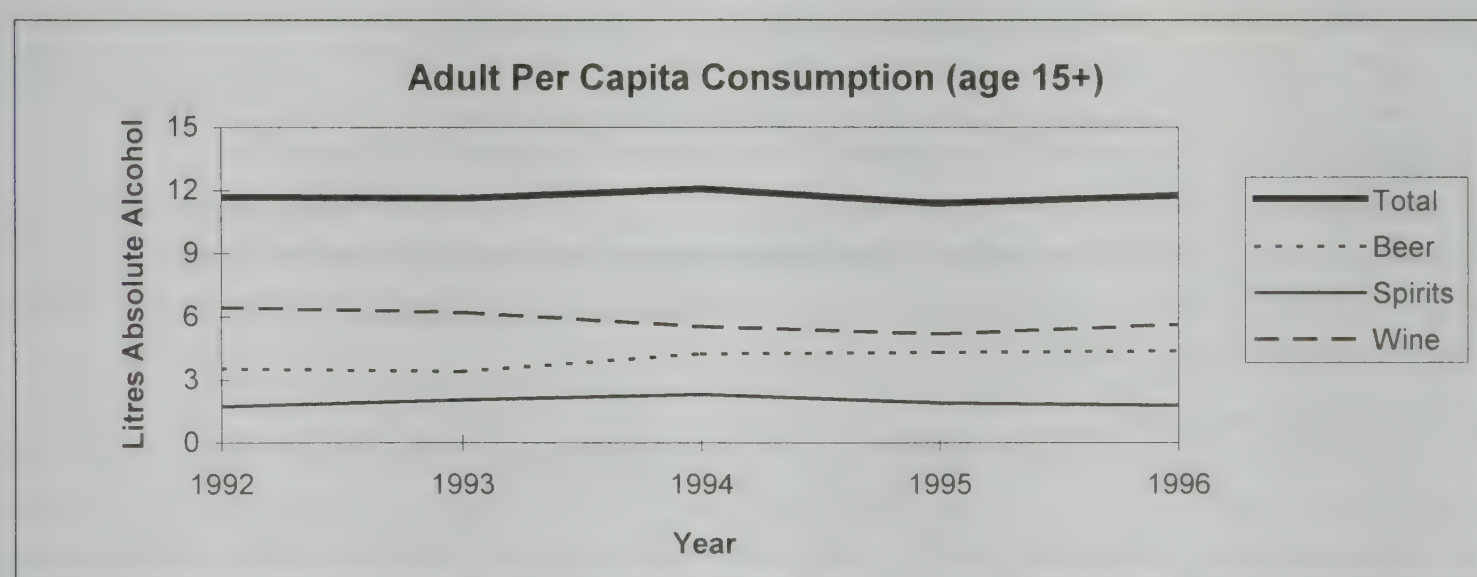
Socioeconomic situation

GNP per capita (US\$), 1995: 3250

Alcohol production, trade and industry

Croatia produces, imports and exports beer, wine and distilled spirits.

Alcohol consumption and prevalence



Consumption

Croatia reports substantial consumption of all three categories of alcoholic beverages. It is estimated that in regions where there is home production of alcohol, consumption may be as much as two to three times the recorded amount.

Age patterns

A study of 2815 15 to 16 year olds (1518 boys and 1297 girls) was carried out in 1995. The response rate was 92 per cent (91 per cent for boys and 92 per cent for girls). Seventy per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 33 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 82 per cent (85 per cent for boys and 79 per cent for girls).

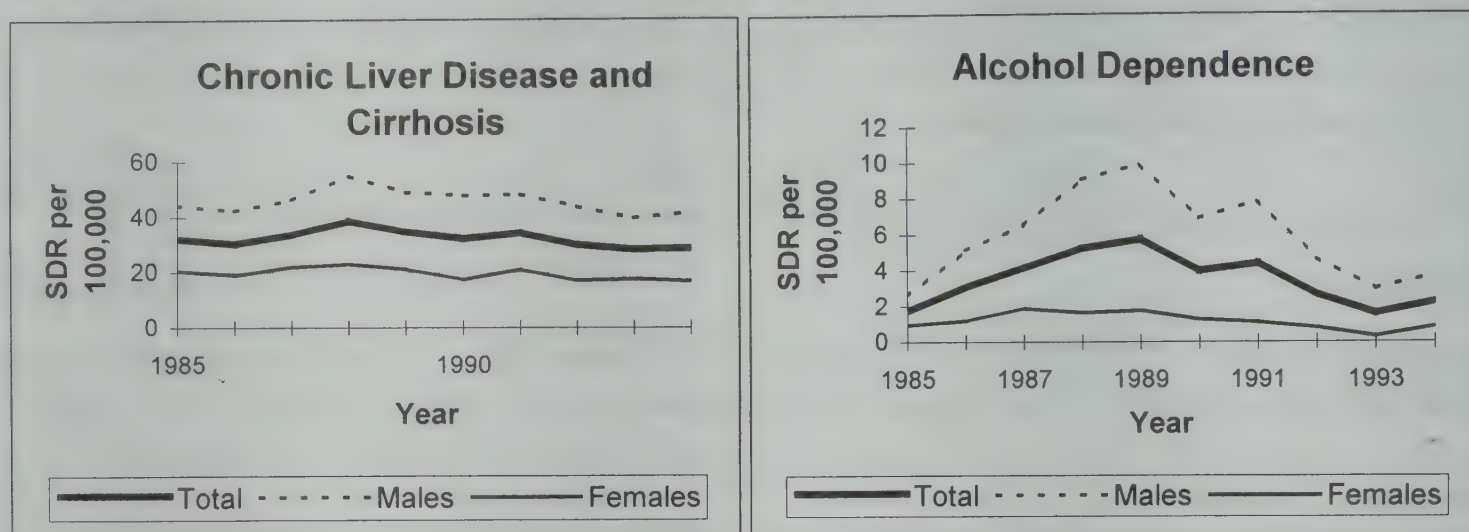
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate of discharges from inpatient treatment for alcoholic psychosis decreased from 53.7 to 24.4 per 100 000 population between 1981 and 1991.

Mortality

The SDR per 100 000 population for chronic liver disease decreased from 38.8 to 21 between 1980 and 1990, then increased in the 1990s to approach the level of 30 per 100 000 population. Rates of death from chronic liver disease and cirrhosis continue to be among the world's highest.



Alcohol policies

Control of alcohol products

Table wines are taxed 22 per cent, beer (4 to 6 per cent) is taxed 35 per cent and spirits (over 35 per cent proof) are taxed 39 per cent. The real prices of all three types of alcohol i.e. beer, spirits and wine have remained stable during the early 1990s.

There is no state monopoly and no licence is required for the distribution or production of beer, spirits or wine. There are restrictions on location of outlets, but there are no restrictions on hours and days of sale. The sale of alcohol is banned in canteens belonging to health and social institutions, schools, public services, companies, special non-alcoholic restaurants and confectioneries.

General and specific health warnings are not required by law. The advertising of all three types of alcohol is banned on television, radio, newspapers/magazines and billboards. Labels for alcohol content are mandated by law, and there is a maximum limit of 40 to 52 per cent volume for the alcohol content of a special type of brandy.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol. The BAC limit is 0.05 g% for drivers in general and 0.0 g% for professional drivers. On conviction for driving above the permitted BAC, a person's driving licence is usually suspended for a limited period of time. Random alcohol breath testing is carried out infrequently.

Alcohol data collection, research and treatment

There is no national agency devoted specifically to alcohol, but alcohol problems are included in the work of the clinic concerned with psychiatry and alcohol and drug dependence in Zagreb. A national programme for the prevention of alcohol dependence is being prepared.

At the regional level, there are Clubs of Treated Alcoholics based on the Zagreb Alcoholic School model. There are also self-help groups with trained leaders who are either treated alcohol dependents or volunteer medical or social professionals. The activities of the groups include therapeutic work, with both the patient and the patient's family; joint social activities; the prevention of alcohol dependence through the adoption of healthier habits; and the creation of alcohol-free environments. The development of outpatient care paralleled the reversal in what had been a rising trend in admissions for inpatient treatment of alcohol dependent persons in the early 1980s.

Czech Republic (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	10 283 000	10 306 000	10 296 000
Adult (15+)	7 870 000	8 096 000	8 298 000
% Urban	63.6	64.9	65.4
% Rural	36.4	35.1	34.6

Health status

Life expectancy at birth, 1990-1995 : 67.8 (males), 74.9 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

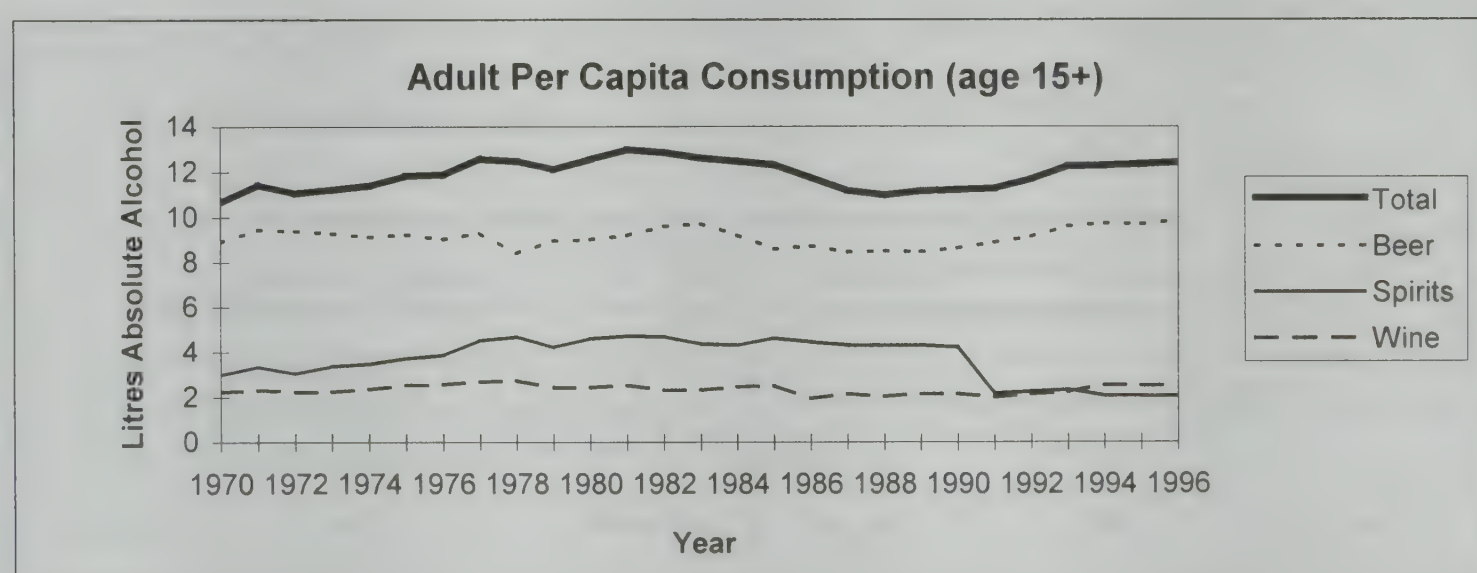
Socioeconomic situation

GNP per capita (US\$), 1995: 3870 , PPP estimates of GNP per capita (current int'l \$), 1995: 9770 .

Alcohol production, trade and industry

In 1995, there were 72 breweries in the Czech Republic. Ninety per cent of them have been privatised. The country's brewers are now looking to export markets, particularly into Western Europe, to fuel growth. Plzensky Prazdroj is the largest brewery in the Czech Republic, and the country's second largest exporter. The Czech Republic also produces and exports distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

The Czech Republic is one of the world's highest consumers of beer. Spirits consumption fell dramatically as a result of political changes of the early 1990s, but an increase in beer consumption compensated for this.

Prevalence

A 1993 representative sample of males between the ages of 20 and 49 in Prague showed that 28 per cent averaged 50 grams or more of pure alcohol per day, up from 23 per cent in 1988. A 1992 survey showed that 24 per cent of males between the ages of 27 and 38 consumed more than 50 grams of pure alcohol a day, while 8 per cent of females between the ages of 20 and 49 consumed more than 20 grams a day. A survey of a probability sample of 718 Prague women aged 20 to 49 found that 47 per cent averaged a daily intake of 5 grams or more of pure alcohol, while 8 per cent averaged 20 grams or more daily.

Age patterns

A study of 2962 15 to 16 year olds (1626 boys and 1336 girls) was conducted in 1995. The response rate was 92 per cent (91 per cent for boys and 93 per cent for girls). Ninety-one per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 54 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 97 per cent for both boys and girls.

In a 1993 school survey of 14 and 16 year olds, 87 per cent and 88 per cent, respectively, had used alcohol in the past year. The majority first used alcohol before the age of 12. This represents an increase in consumption since the 1978 survey.

An earlier study carried out in 1993 among school children aged 15 years found that 95.4 per cent of boys had tried alcoholic beverages, 38.3 per cent were drinking alcoholic beverages at least once a week and 35.6 per cent had been drunk at least twice. Among girls, 96.6 per cent had tried alcoholic beverages, 18.5 per cent drank at least weekly, and 19.1 per cent had been drunk two or more times.

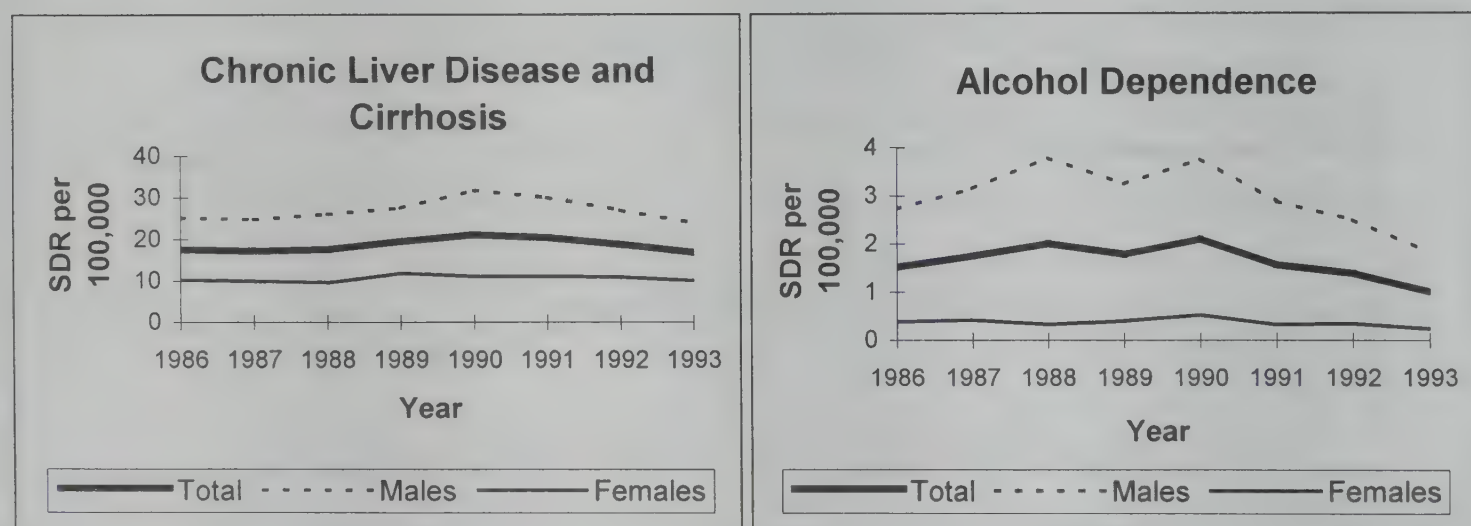
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate per 100 000 population of discharge from treatment for alcoholic psychosis among men rose from 39 to 48 between 1980 and 1990, then decreased to 16 in 1995. Female discharge rates mirrored this pattern, rising from 4.1 in 1980 to 7.5 in 1990, then receding to 3.3 in 1995. In 1994, 40 per cent of all psychiatric hospital admissions of males were due to substance-related disorders (mostly alcohol dependence).

Mortality

In 1993, the SDR per 100 000 population for chronic liver disease was 16.75, down from 17.5 in 1986. Both male and female liver disease rates experienced a rise around 1990, with the increase being more pronounced among males, whose rates rose from 25 to 31.7 between 1986 and 1990, then fell to 23.9 in 1993.



Alcohol policies

Control of alcohol products

The price of alcoholic beverages is equal to the basic price, plus the consumer tax, plus the value added tax. The value added tax is equal to 22 per cent of basic price and consumer tax. Spirits are taxed a consumer tax of 195Kč (US\$ 6.30) per litre of 100 per cent alcohol, beer of more than six per cent pure alcohol is taxed 430Kč (US\$ 14.00) per 100 litres, and beer which is five per cent absolute alcohol and less is taxed 157Kč (US\$ 5.10) per 100 litres. The real prices of beer and wine have remained stable during the early 1990s, but the real price of spirits has decreased.

It is not permitted to drink alcoholic beverages on health service premises, and there are some restrictions on drinking alcohol at sporting events. There are no restrictions on hours or days of sale or types of outlets. There is no state monopoly but a licence is required for the production and distribution of beer, wine and spirits, and there are restrictions on where outlets may be located. There is a voluntary code restricting advertising of alcoholic beverages. General and specific health

warnings are not required and there is no maximum legal limit for the alcohol content of beverages. Labels are required regarding alcohol content.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol. The BAC limit is 0.0 g%. On conviction for a first offence of driving above the BAC limit, suspension of driving licence is usual if the BAC is high. Imprisonment can be imposed in the case of a crash. Random alcohol breath testing is carried out infrequently.

There are mass media and school-based programmes which deal with alcohol in relation to tobacco and/or illicit drugs. A number of books relative to prevention have been published as part of a programme called Fit In. In 1993, the Czech Ministry of Education, Youth and Sport funded the development of a model preventive programme based on peer leadership. This was piloted in four Prague schools in 1994.

Alcohol data collection, research and treatment

Priorities of the early 1990s have been to address particular alcohol problems such as drinking and driving, and the consumption of alcohol by young people. There is a movement towards having a joint approach to issues related to alcohol, drugs and tobacco. The National Centre for Health Promotion in Prague was the national agency for prevention, but was abolished in 1995. The National Institute for Public Health now has responsibility for coordination of preventive activities, but is concerned mainly with prevention of drug use among youth.

The Prague Psychiatric Centre (Addiction Studies Unit) is a research institute that specializes in alcohol issues. There is no specific agency in charge of data collection but, in practice, alcohol-related data are regularly monitored by the Prague Psychiatric Centre's Addiction Studies Unit. The Society on Drugs and Alcohol is a nongovernmental organization that collects bibliographical data on medico-social aspects and demand reduction, legal provisions and strategies, international co-operation and trafficking. The intended audience includes researchers, scientists, policy makers, service providers and the general public. A full-time professional staff of 80 people is employed. There are 170 full-time workers employed, and a review of overall results is published annually. The Czech Medical Society's Section for Alcohol and Drugs focuses primarily on statistical data (treatment demand, emergency admissions, etc.) in registered patients.

The number of inpatient psychiatric treatment facilities changed very slightly during the period 1970-1990. Independent of alcohol treatment centres, there are acute detoxification units (usual stay of 24 hours) whose clients are generally from lower socioeconomic groups. Very severe alcohol intoxication and patients in states of delirium are treated in emergency units of general hospitals. Admissions to detoxification centres decreased sharply between 1988 and 1990, at a time when other objective indicators of alcohol problems such as traffic crashes and criminal offences under the influence of alcohol showed exactly the opposite trend.

Denmark

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 123 000	5 140 000	5 181 000
Adult (15+)	4 056 000	4 264 000	4 293 000
% Urban	83.7	84.8	85.2
% Rural	16.3	15.2	14.8

Health status

Life expectancy at birth, 1990-1995 : 72.5 (males), 78.2 (females)
Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

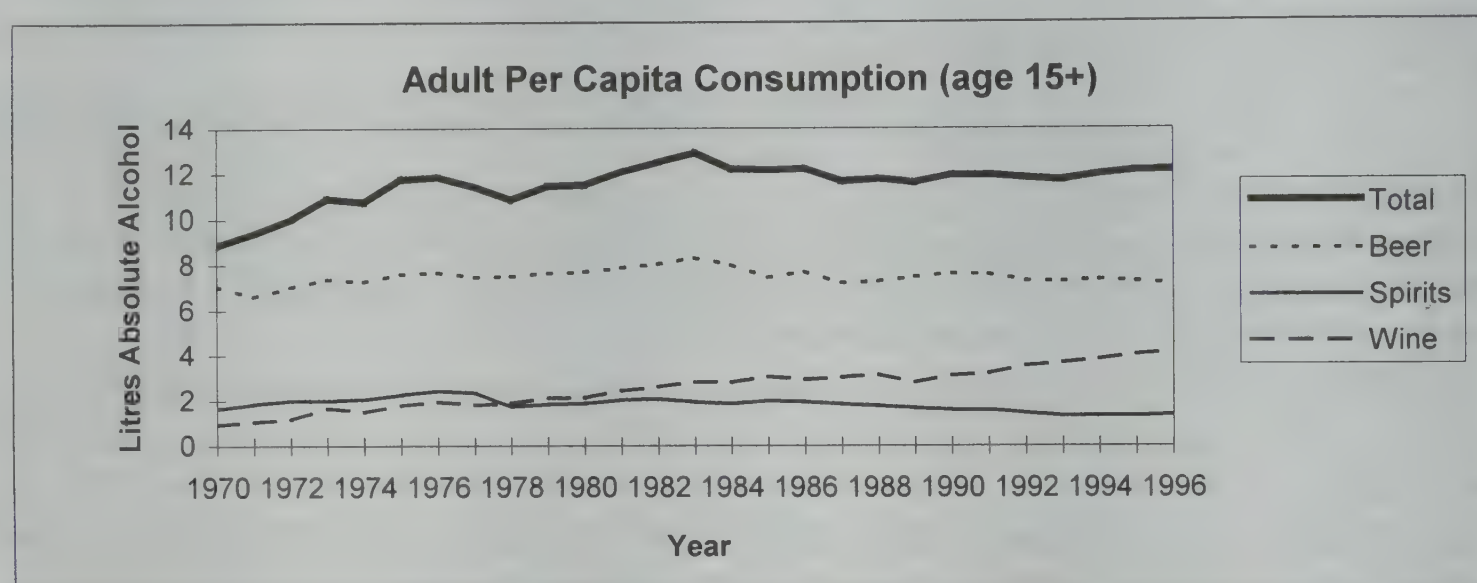
GNP per capita (US\$), 1995: 29 890, PPP estimates of GNP per capita (current int'l \$), 1995: 21 230. Average distribution of labour force by sector, 1990-1992 : agriculture 6%; industry 28%; services 66%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Denmark produces beer and distilled spirits, but is primarily a wine importer. Denmark's largest brewer is Carlsberg A/S. More than 80 per cent of Carlsberg's sales are outside of Denmark.

Alcohol consumption and prevalence



Consumption

Home brewing of beer and wine is legal, but home distilling is illegal. A sharp decline in spirits consumption followed the imposition of high taxation in the early twentieth century, but much of the reduction in consumption, in terms of pure alcohol, was counteracted by increased beer consumption, which now comprises about 60 per cent of total alcohol consumption. Although there is no quantified information available on unrecorded consumption, it is estimated to be about one fifth of recorded consumption. This would mean that total consumption of absolute alcohol in 1996 was 15.2 litres per adult.

Prevalence

A 1990 survey of people aged 15 years and over found that 39 per cent were infrequent consumers of alcohol (less than weekly or never), 44 per cent were moderate consumers and 16 per cent were frequent consumers (three or four days a week). A representative sample of the population (1542) was surveyed in August 1984 and January 1985. The results were similar to those of an earlier study done in 1977, i.e. women drank considerably less than men, the younger age groups drank more than the older and elderly, and those in the higher socioeconomic groups drank more than those in the lower.

Age patterns

A study of 2439 15 to 16 year olds (1189 boys and 1250 girls) was conducted in 1995. The response rate was 90 per cent (90 per cent for boys and 91 per cent for girls). Ninety-four per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 82 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 96 per cent (97 per cent for boys and 95 per cent for girls).

A WHO study of schoolchildren in 1993/1994 found that 94.9 per cent of boys aged 15 years had tried alcoholic beverages, 40.1 per cent drank at least once a week and 64.7 per cent had been drunk at least twice. Of girls aged 15 years, 95.6 per cent had tried alcoholic beverages, 33.4 per cent drank at least once a week and 66.7 per cent had been drunk at least twice. A decade earlier, in 1983, a survey of 4700 young people aged 13 to 19 years found that practically all had had experience with alcohol. Boys consumed approximately twice as much as girls. Children from higher-income families consumed the most.

Economic impact of alcohol

In 1994 more than 13 million kroner (US\$ 1.9 million), 2.44 per cent of total private consumer expenditure, was spent on alcoholic beverages in Denmark.

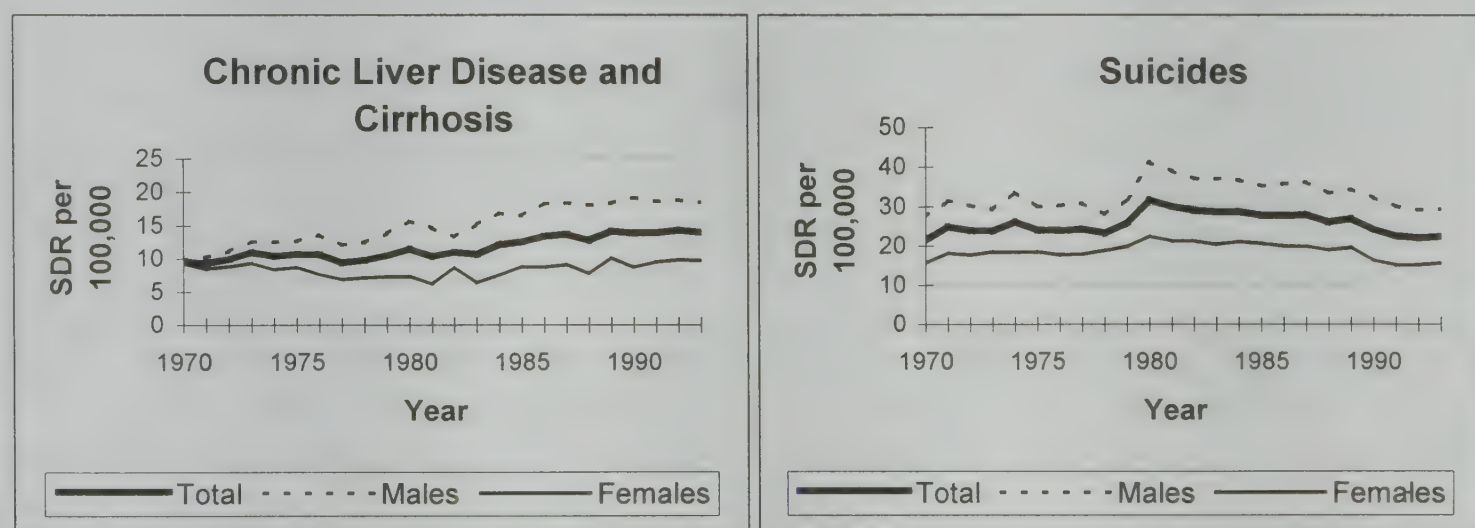
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of people receiving somatic treatment for alcohol dependence rose from 7092 to 7943 between 1989 and 1993, while the number of people receiving psychiatric treatment for alcohol dependence fell from 6320 to 4460 during the same period. Persons with alcohol-related problems (alcohol dependence, alcohol psychosis and alcohol poisoning) as the main diagnosis admitted to psychiatric hospitals, departments and treatment homes totalled 14.1 per cent of all admissions in 1978, and rose to 16.6 per cent in 1987.

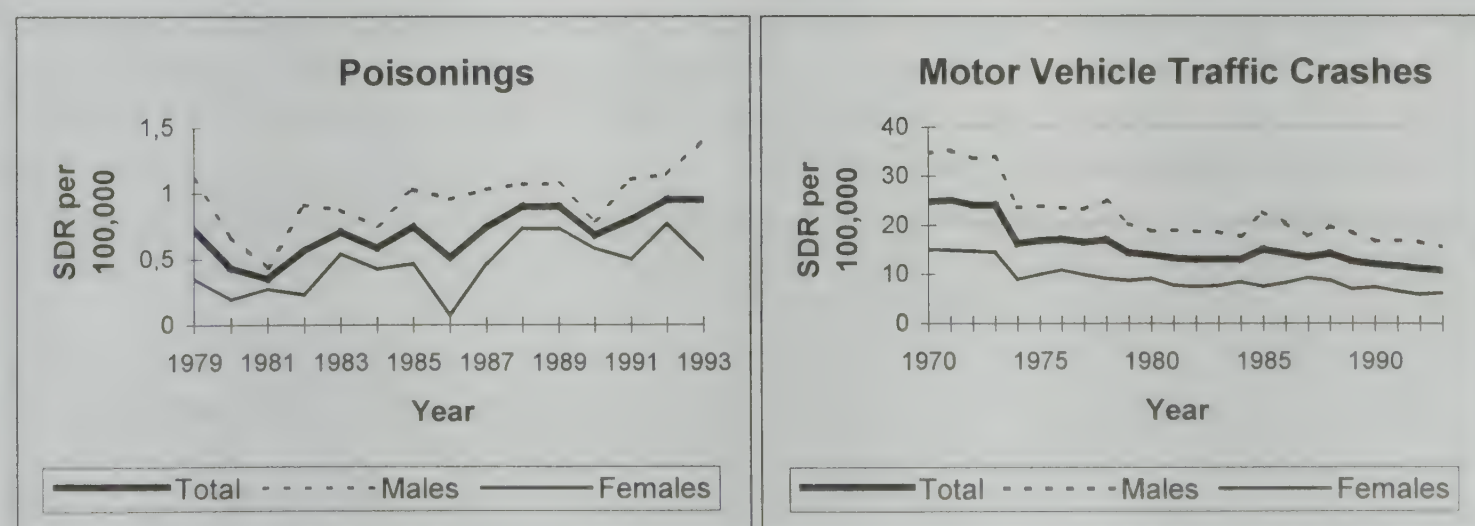
Mortality

Between 1911 and 1924, a period where the per capita consumption of absolute alcohol among people over the age of 15 decreased from 11 litres to 4.2 litres, the number of suicides amongst alcohol abusers fell from 164 to 83. The number of total suicides decreased from 524 in 1911 to 466 in 1924. The SDR per 100 000 population for chronic liver disease rose from 11.4 to 13.5 between 1980 and 1993.



Morbidity

The number of people receiving somatic treatment for alcohol poisoning decreased from 791 to 605 between 1989 and 1993.



Social problems

The rate per 100 000 population of alcohol-related motor vehicle traffic crashes decreased from 47 to 29.7 between 1970 and 1987. The rate (per 1000 population over age 15) of cautions and arrests for public drunkenness fell from 2.7 to 2.2 between 1990 and 1994.

Alcohol policies

Control of alcohol products

Table wines are taxed approximately 20 per cent, beer is taxed approximately 18 per cent and spirits (over 35 per cent proof) are taxed approximately 60 per cent. The real prices of beer and wine has been decreased and the real price of spirits has been stable during the early 1990s.

There is no state monopoly but a licence is required for the production and distribution of all types of alcoholic beverages. There are restrictions on hours and days of sale. Alcoholic beverages can be sold only during normal opening hours: Monday to Friday from 06:00 to 17:30 hours and Saturday from 06:00 to 12:00 hours. There are no restrictions on types and location of outlets. Serving minors (those aged under 18 years) is illegal.

General and specific health warnings are not required by law. The advertising of alcoholic beverages is banned on radio and television and is restricted by means of a voluntary code in other media such as newspapers/magazines, billboards and cinemas. There is no maximum legal limit for the alcohol content of beverages. Labels for alcohol content are required.

Control of alcohol problems

The BAC limit is 0.08 g% for drivers. If a driver's BAC is 0.12 g% or lower, suspension of driving licence is not usual. However, the driver's licence can be suspended for a first offence when the BAC limit is above 0.12 g%. Imprisonment can be imposed for second and subsequent offences. Random alcohol breath testing of motor vehicle drivers is carried out frequently.

There is no agency devoted specifically to the prevention of alcohol-related problems, but it is included in the work of the National Board of Health. An adviser on alcohol matters is attached to the Ministry of Education and, since 1975, information on alcohol and its damaging effects has been part of health education in primary schools. The objective is to prepare pupils to take responsibility for decisions regarding drinking. Temperance societies issue informative material through their national federation. Public information campaigns are also carried out, and the Road Safety Council has concentrated on education concerning alcohol and traffic. The Committee of Health Education, the Crime Prevention Council and the National Board of Social Welfare are also involved in educational and other preventive work. The National Board of Health organizes mass media campaigns. Some deal with alcohol only and others with alcohol and other substances, e.g. tobacco and/or other drugs.

Professional training courses have been organized through the Ministry of Education and local districts, 14 out of 15 of which have special advisers on alcohol and narcotics, some teacher training colleges and some medical faculties. Private temperance societies train instructors in collaboration with the Ministry of Health adviser.

Alcohol data collection, research and treatment

A Government Commission on Alcohol and Narcotics was mandated to institute and carry out sociological and socio-psychological research into alcohol and narcotics problems and to cooperate with Danish and foreign research bodies in this work. After 1988, the research section was transferred to the Danish National Institute for Social Research.

Following legislation in 1960, emphasis has increasingly been placed on outpatient treatment of alcohol dependent people. There is a move towards greater interest in early diagnosis and care of alcohol problems through primary health care services.

The A-Ring is affiliated with the Young Men's Christian Association (YMCA) and functions in a clinical capacity. Some clinics are in psychiatric hospitals or departments, but most are in flats or houses in shopping areas or residential quarters and are open usually only twice a week for four to five hours in the evening. About 15 000 people a year are admitted to outpatient clinics. The number of treatment homes increased from four (118 beds) in 1960 to seven (250 beds) in 1985 with approximately 3000 people admitted annually. All, but one, are run by two private organizations, the Blue Cross and the YMCA. Alcoholics Anonymous has never really gained a footing in Denmark. The number of outpatient clinics for alcohol dependents rose from 10 in 1960 to 61 in 1986.

Estonia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 480 000	1 575 000	1 530 000
Adult (15+)	1 161 000	1 227 000	1 214 000
% Urban	69.7	71.8	73.1
% Rural	30.3	28.2	26.9

Health status

Life expectancy at birth, 1990-1995 : 63.8 (males), 74.8 (females)

Infant mortality rate in 1990-1995 : 16 per 1000 live births

Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 9%; industry 33%; services 58%

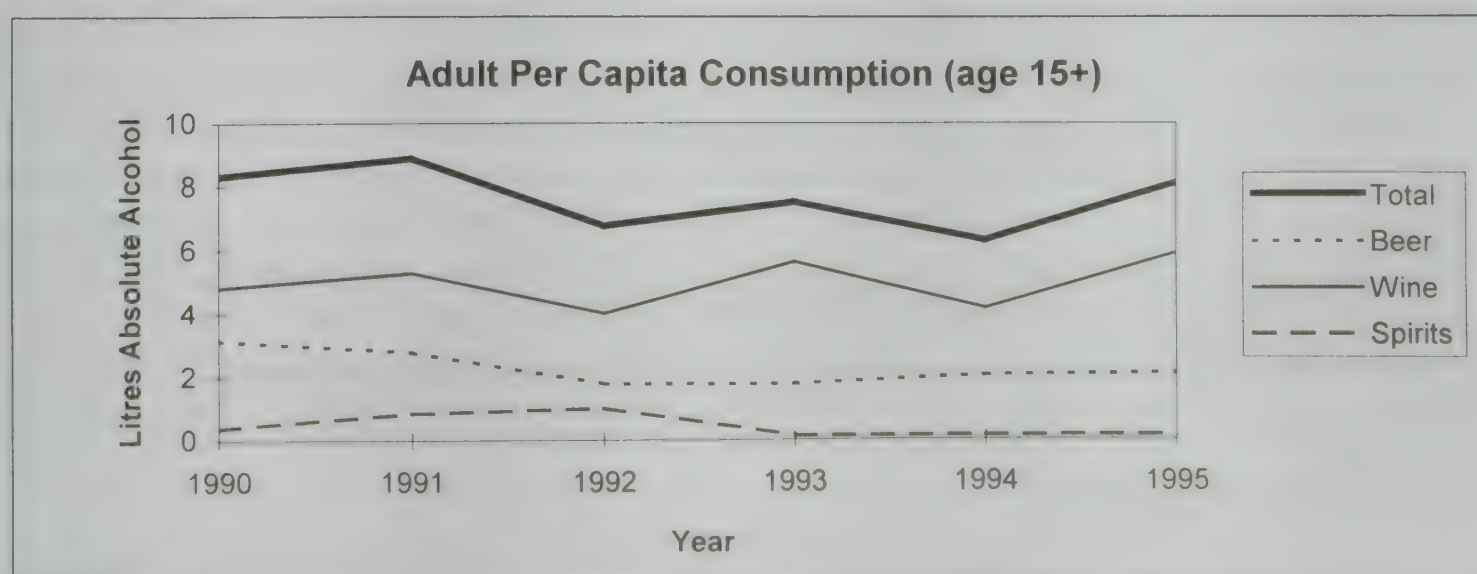
Alcohol production, trade and industry

Legal alcohol production is dominated by Liviko, the state distilled spirits monopoly, which in 1995 claimed its products comprised 60 per cent of the nation's vodka sales. An import-export joint venture between Liviko and the Finnish alcohol monopoly, ALKO, has expanded to include a shared retail outlet, the company's second retail store in Tallinn. As of 1997, Liviko was slated for privatization. The Finnish alcohol production monopoly ALKO has purchased control of Ofelia, the country's second largest distiller.

As of 1994, Estonia had seven industrial breweries, the largest of which are Saku Brewery and Tartu Brewery. After Baltic Beverages Holdings (a joint venture of the largest Finnish, Swedish and Norwegian brewers) purchased control of Saku Brewery, Saku's sales shot up to 57 per cent of the market's volume. In 1996, Tartu's share of the beer market was 22 per cent and later, the Finnish brewer, Olvi, purchased control of Tartu Brewery.

Since independence in 1991, rapid economic liberalization and deregulation have been accompanied by an explosion in the number of outlets selling alcohol, as well as increased visibility of major brands. According to the Estonian Shops Directory, in 1993 (the first year for which records are available) there were 1517 shops in the country licensed to sell alcohol. Even as the population has fallen, this number has grown: by 1995, 2685 shops were selling liquor - an average of one outlet for every 553 Estonians.

Alcohol consumption and prevalence



Consumption

Distilled spirits account for the majority of recorded alcohol consumption. Recorded consumption rose slightly 1990 to 1991, and then fell off in 1992, rose again in 1993 and fell again in 1994. The economy and taxes, and their impact on vodka prices, explain these fluctuations almost entirely. At the end of 1992, the consumer price index was more than 10 times that of the previous year, reducing the rise in legal alcohol sales. Towards the end of 1993, inflation had slowed but the government raised alcohol taxes by 30 per cent, and consumption of legal vodka plummeted.

Although there is no dispute that illegal production and sales of vodka are substantial, estimates vary. Spokespersons for the National Economic Police put the illegal market at 25 per cent of the total market. In addition to this internal illegal production, customs officials estimate that a million litres of spirits enter the country illegally each year. A spokesperson for Liviko estimated that illegal alcohol production varied between 20 and 50 per cent of the total market, depending on the time and the region. Representatives from the International Order of Good Templars estimated unrecorded consumption of alcohol much higher, in the region of five to seven litres per capita in 1993.

Prevalence

According to EMOR, a Gallup market research subsidiary operating in Estonia, there was a 50 per cent increase in "almost weekly" drinking between 1993 and 1996, and a rise in every category of drinking except "over six months ago" and abstainers. Seven per cent of vodka drinkers drink weekly.

A survey by a group of Nordic researchers in 1994 found that 53 per cent of men and 31 per cent of women drank at least weekly, 20 per cent of both genders drank at least once a month, and only 10 per cent of men and five per cent of women had not had a drink in the past year.

A study carried out in 1991 randomly selected 538 urban and rural families and also interviewed adolescents aged 14 to 16 years. Five per cent of the families consumed no alcohol, 54 per cent drank a few times a year, 37 per cent drank at least a few times a month, and four per cent drank more frequently. Three per cent of fathers consumed no alcohol, 23 per cent drank a few times a year, 50 per cent drank at least a few times a month, and 24 per cent drank more frequently. Fourteen per cent of mothers consumed no alcohol, 54 per cent drank a few times a year, 29 per cent drank at least a few times a month, and 3 per cent drank more frequently.

Age patterns

A study of 3118 15 to 16 year olds (1438 boys and 1680 girls) was conducted in 1995. The response rate was 83 per cent (82 per cent for boys and 84 per cent for girls). Eighty per cent of the respondents had drunk any alcoholic beverage in the last 12 months, and 46 per cent had been drunk in the last 12 months. Lifetime prevalence of alcohol use was 95 per cent (95 per cent for boys and 94 per cent for girls).

The 1991 survey of families found that the proportion of alcohol users, as well as of heavy drinkers, increased significantly with age and that girls consumed alcohol less frequently and less heavily than did boys. EMOR confirms the age pattern finding: according to its market research, the largest proportion of heavy vodka drinkers are adults between the ages of 35 and 49. Their ethnicities parallel those of the general population.

A WHO study for 1993/1994 showed that 92.5 per cent of boys aged 15 had tried alcoholic beverages, 13.2 per cent drank alcoholic beverages at least once a week, and 25.8 per cent had been drunk at least twice. Of girls aged 15, 91.9 per cent had tried alcoholic beverages, 3.3 per cent drank alcoholic beverages at least once a week, and 9.6 per cent had been drunk at least twice. Another study of young people ages 11 to 15, conducted between 1992 and 1994, found that 15 per cent of 15 year old boys and 8 per cent of girls had been drunk, and 5 and 1 per cent, respectively, had been drunk between 4 and 10 times in the past month. According to another study of young people in ninth and tenth grades (roughly ages 14 and 15), daily and weekly drinkers were most likely to drink beer and "long drinks" (sweet flavoured gins, vodkas and rums containing approximately five per cent alcohol).

Economic impact of alcohol

Excise and sales tax revenues from alcohol totalled approximately 10 per cent of the national budget in 1995.

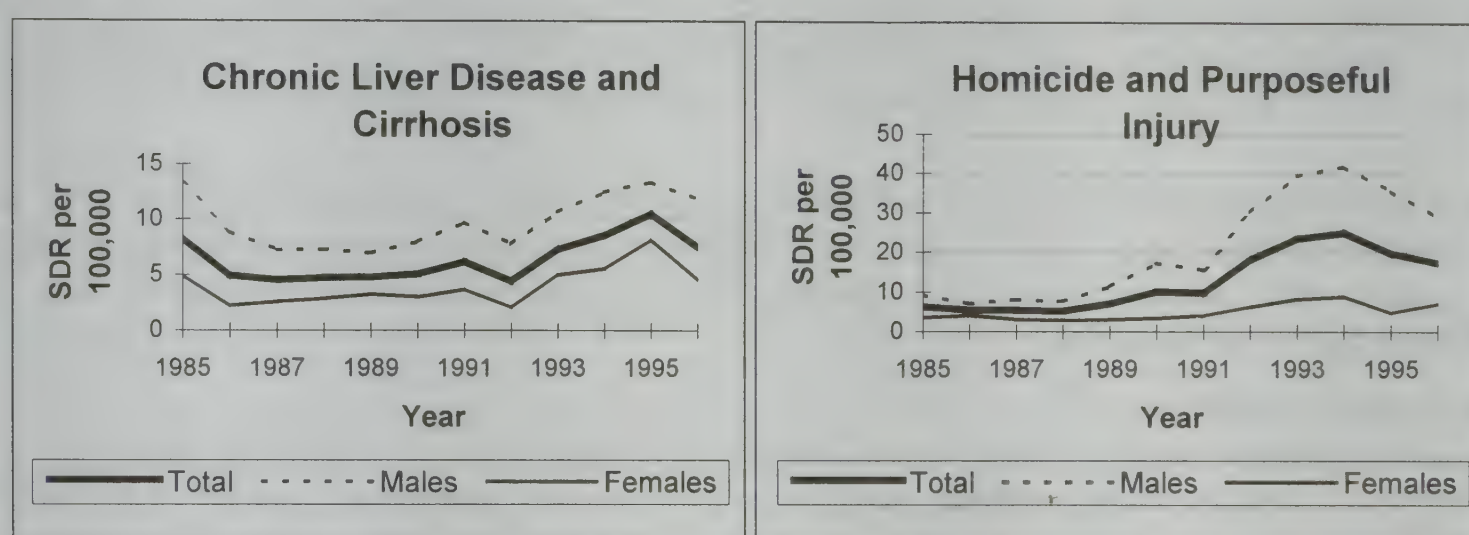
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate per 100 000 population of inpatient treatment admissions for alcoholic psychosis decreased from 66.5 to 29 between 1980 and 1990, and then rose to 53.2 in 1993. The number of treated inpatient cases of alcohol dependence decreased from 2035 to 1696 between 1980 and 1993, while the number of outpatient consultations diminished from 13 514 to 7394 during the same period. The decline in inpatient admissions due to alcohol dependence can be attributed to the decreased availability of treatment.

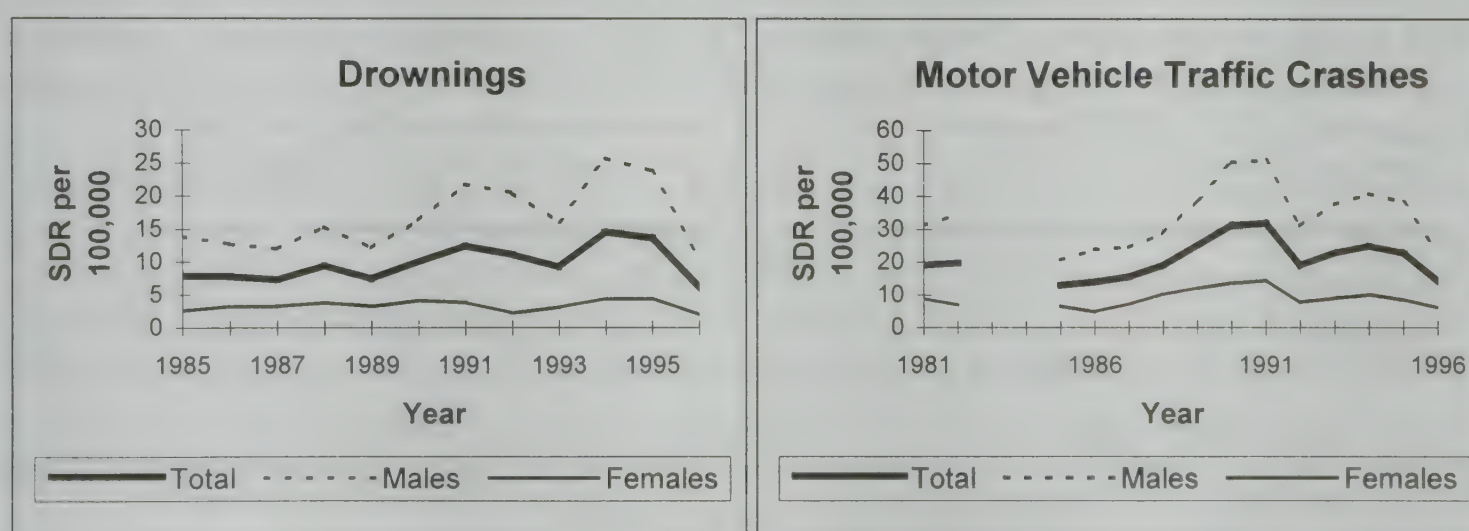
Mortality

The rate per 100 000 population of acute alcohol deaths doubled between 1990 and 1993, from 10 to 20, and the number of deaths from alcohol poisoning nearly tripled for both men and women between 1989 and 1993. The SDR per 100 000 population of mortality from alcoholic cirrhosis of liver was 1.1 in 1990, remained constant at 1.2 during 1991 and 1992, and then rose to 1.6 in 1993. The SDR per 100 000 population for chronic liver disease rose from 5.7 to 9.2 between 1990 and 1993, then to 11 in 1994.



More than 70 per cent of apprehended adult offenders and 69 per cent of juvenile offenders in homicides and attempted murders were drunk at the time of the crime.

Alcohol was involved in 72 per cent of drowning deaths in 1995.



Social Problems

In 1985, the number of alcohol-related motor vehicle crashes per 100 000 population was 15.5. This figure rose to 32.2 in 1993, and then to 39.3 in 1994. In 1994, 1995 and the first half of 1996, the percentage of motor vehicle crashes involving drunk drivers hovered between 28 and 30.

In 1995, 43 per cent of apprehended adult criminals were drunk at the time of the crime. The more violent the crime, the more likely the perpetrator was drunk. More than 70 per cent of apprehended offenders in assaults involving grievous bodily harm and rapes and attempted rapes were drunk. The percentage of drunken offenders arrested for robbery and hooliganism also exceeded 70 per cent. Juvenile crime figures mirror the adult rates. Juvenile drinking offences are also on the rise, with

more than two and a half times as many juveniles arrested for drunkenness in 1995 than in 1992. Apprehended young offenders in 79 per cent of rapes were drunk at the time of the crime.

Alcohol policies

Control of alcohol products

The real prices of beer and wine have been increasing and the price of spirits has been stable during the early 1990s. There is an 18 per cent value added tax on wine, beer and spirits.

Excise taxes are up to US\$ 1.31 per litre of wine, US\$ 0.12 - 0.75 per litre of beer, and US\$ 0.09 per 1 per cent volume absolute alcohol per litre. In December, 1996, the state reduced the excise tax on imported beer from more than three times the levy on domestic beer to the same level.

The sale of alcoholic beverages is forbidden in, or close to, medical and children's institutions. There are no restrictions on hours and days of sale. Restrictions on type and location of outlets are left to the discretion of the cities and towns. A licence is required for the production and distribution of all three types of alcoholic beverages, i.e. beer, spirits and wine. Wholesalers and retailers are required to have working capital of at least US\$ 8800 in order to acquire a licence.

The advertising of beer, wine and spirits on radio and television is banned, but as of late 1996 there was no law defining alcohol, so the country's largest brewer, Saku, advertised its alcoholic beers on television. As of 1995, alcohol advertisements in the streets and in newspapers were not yet regulated by law.

Labels for alcohol content of beverages are required by law. There is no maximum legal limit for the alcohol content of beverages. As of late 1996, a law which provides directives for the production, import, export, sale, taxation, licensing, quality, labelling and advertising of alcohol was under consideration by the Government.

Control of alcohol problems

There is an minimum legal age limit of 18 years for buying alcohol. The BAC limit is 0.0 g%. Conviction for a first or second offence will generally result in a penalty or fine of up to 200 DEM (US\$ 14.10), or a loss of driving licence for up to 36 months, but there is also the possibility of imprisonment for up to 30 days. Random alcohol breath testing is carried out, but infrequently. There are school-based programmes which deal with alcohol, tobacco and other drugs.

Alcohol data collection, research and treatment

There is no agency devoted specifically to alcohol, but it is included in the work of the Public Health Department within the Ministry of Social Affairs. In 1995, a foundation for health protection and promotion was created at the Ministry of Social Affairs. It has started a project developing preventive materials.

The Estonian Medical Statistical Bureau was founded in 1990 as a governmental organization that concentrates on data relating to psychiatric and narcological diseases by region, and particularly data concerning drug and alcohol dependent patients (admissions, treatment, etc.). A full-time professional staff of ten people is employed, and a review of overall results is published annually. At the national level, the Department of Public Health dedicates one civil servant to alcohol and drug-related issues.

The number of government beds for alcohol dependence treatment fell from 773 during Soviet rule to 80 as of 1995. Treatment is now increasingly in the hands of private or voluntary groups. There are approximately 10 Alcoholics Anonymous groups in the country.

Finland

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 780 000	4 986 000	5 107 000
Adult (15+)	3 810 000	4 024 000	4 132 000
% Urban	59.8	61.4	63.2
% Rural	40.2	38.6	36.8

Health status

Life expectancy at birth, 1990-1995 : 71.7 (males), 79.6 (females)

Infant mortality rate in 1990-1995 : 5 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 20 580, PPP estimates of GNP per capita (current int'l \$), 1995: 17 760

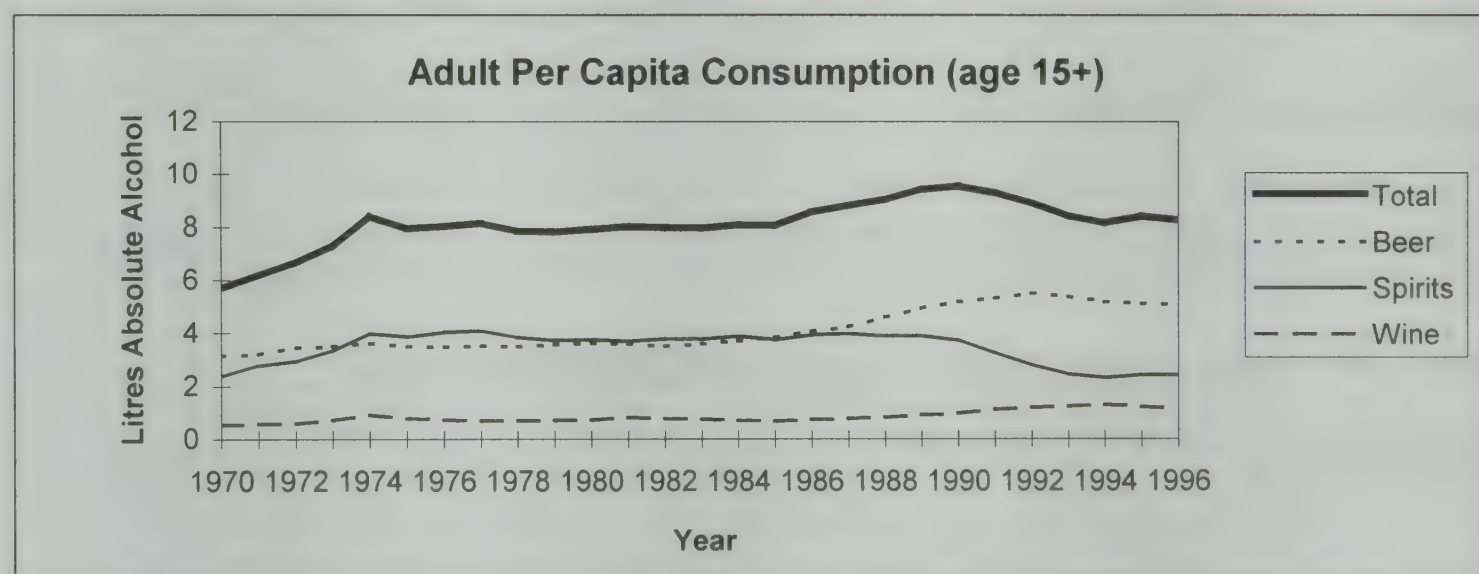
Average distribution of labour force by sector, 1990-1992 : agriculture 9%; industry 29%; services 62%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Finland produces, imports and exports beer, distilled spirits and wine. As a result of joining the European Union, Finland has separated its retail and production monopolies. ALKO, the former spirits and wine production and importing monopoly, continues to dominate spirits production although its retail monopoly of 255 stores has been preserved. Oy Hartwall AB (of which Denmark's Carlsberg owns 10 per cent) and Oy Sinebrychoff AB are the two largest brewers.

Alcohol consumption and prevalence



Consumption

Estimated unrecorded consumption was 20 per cent of recorded consumption in 1994. Using 1996 figures, this would bring total adult per capita consumption to approximately 10.3 litres of absolute alcohol.

Prevalence

Two survey samples representing the population between 15 and 69 years of age were conducted in 1984 and 1992. The number of respondents was 3624 in 1984 and 3446 in 1992. Technically, the two studies were almost identical. Results showed a downward trend in abstinence among women in all age groups since 1984. Among men, the changes were smaller and hardly significant. An increase in drinking frequency was shown in all gender and age groups. Frequent drinking taking place daily, or

almost daily, was however rare. Only one per cent of women and three per cent of men drank daily in 1992.

A sample of 985 women and 863 men was drawn from the population register in the four monitoring areas (the provinces of North Karelia and Kuopio in eastern Finland, the city of Turku and its rural municipalities in southwest Finland, and the southern cities of Helsinki and Vantaa). All subjects were 25 to 64 years of age. Eight per cent of men were abstainers, compared with 18 per cent of women, and 8 per cent of men were heavy drinkers compared with 3 per cent of women (heavy drinking was defined as at least 280 grams per week for men and at least 190 grams per week for women).

In 1968, Finnish women very seldom drank, but by 1984 they drank about 20 per cent of all alcohol consumed in Finland and intoxication among women had become more common, particularly among the youngest age group (15 to 19 years). Women with upper-grade clerical jobs had the highest drinking frequencies and annual alcohol consumption

Heavy drinking is common: for men, two-thirds of alcohol consumption occurs during occasions leading to intoxication; for women, 41 per cent of alcohol consumption occurs during occasions leading to intoxication.

Age patterns

A 1995 representative sample of 2300 comprehensive school children born in 1979 found that nearly 90 per cent of all 15 year old students had drunk alcohol in their lifetime, and almost all of those had drunk in the past 12 months. In the past 30 days, 61 per cent of girls and 55 per cent of boys had consumed alcohol. Furthermore, 21 per cent of the respondents had drunk weekly. About one quarter of the respondents had drunk one to three drinks the last time they had a drink (one drink = 1.5 cl of pure alcohol). More than half of the boys and a just less than half of the girls had consumed at least seven drinks the last time they drank. Approximately 16 per cent of boys had consumed 13 drinks or more, compared to 5 per cent of girls. About 12 per cent of girls and 42 per cent of boys who drank alcohol usually took at least seven drinks at a time.

Drinking among young people increased markedly between the early 1960s and the early 1970s, but in 1984 their average consumption was less than in 1976, though still higher than in the 1960s. Over the 16-year period, boys of all ages became far more likely to drink until they reached a stage of intoxication.

Economic impact of alcohol

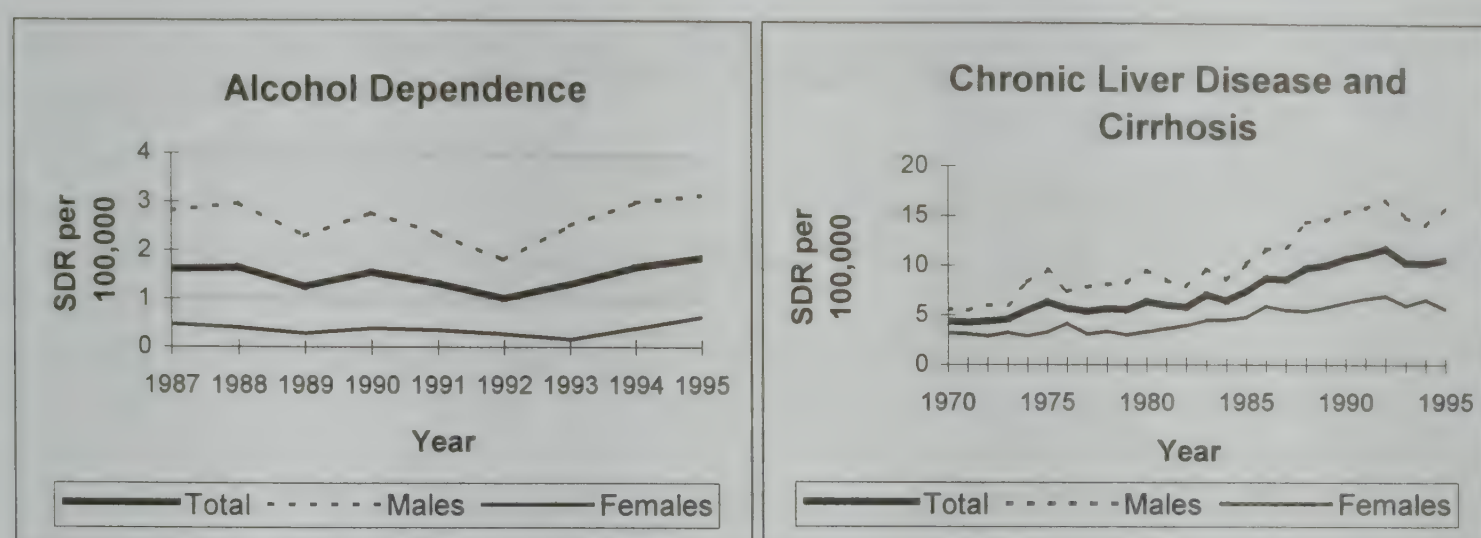
In 1994, expenditure on alcoholic beverages constituted 6.2 per cent of the total consumer expenditure, down slightly from 6.9 per cent in 1990. In 1987, an estimated two per cent of the country's labour force participated in the production and trade of alcoholic beverages.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

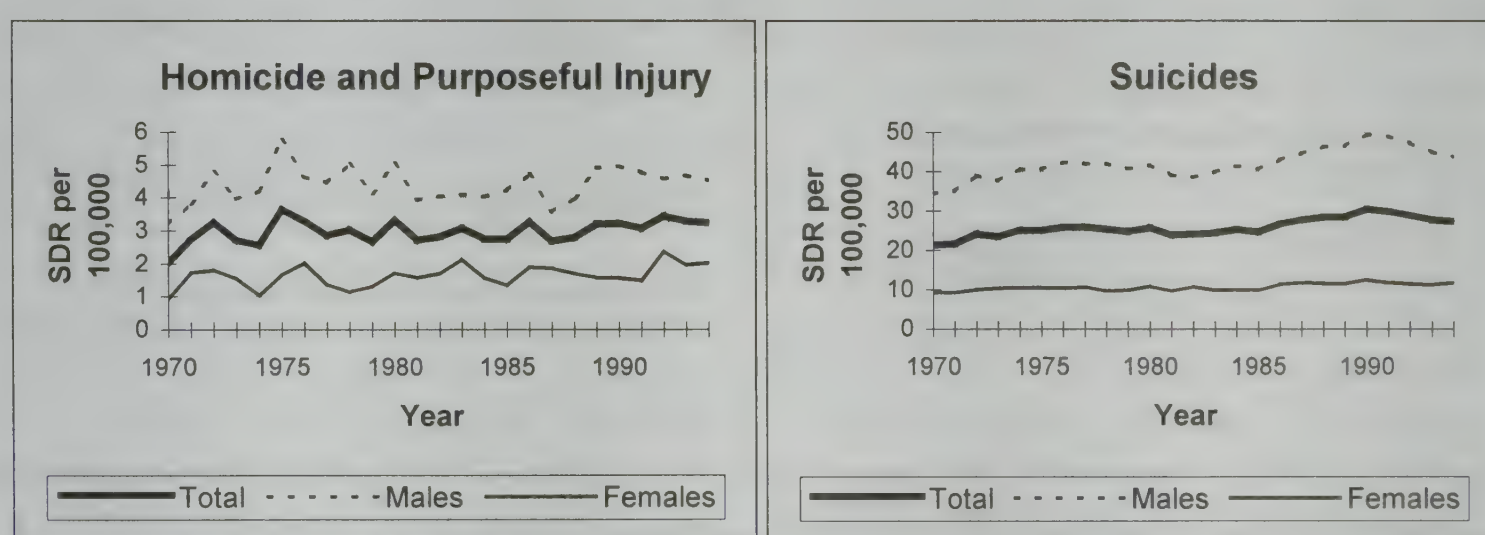
The rate per 100 000 population of alcohol-related admissions to general hospitals rose from 83.3 to 95.5 between 1970 and 1985. The rate per 100 000 population of treatment admissions for alcoholic psychosis was 79.3 in 1994, compared with 77.1 in 1989. The rate of treatment admissions for alcohol dependence was 263.2 in 1994, up from 199 in 1989.

In 1993, 337 327 days of outpatient treatment were given in A-clinics and centres for young people with alcohol problems, and alcohol treatment cases occupied 237 000 bed days in detoxification centres, treatment homes, and hospitals.



Mortality

A total of 1067 suicides (824 males, 243 females) between April 1987 and March 1988 were investigated through face-to-face interviews with next of kin, the attending health care and medical personnel, and from psychiatric, medical and social agency records. Alcohol misuse was found in 44.5 per cent of the men and in 18.4 per cent of the women. In an analysis of forensic psychiatric examinations conducted on persons charged with homicide during several years, it was discovered that the odds ratio for alcohol dependence was about 16 among men and about 50 among women, when compared to the general population. The SDR per 100 000 population for chronic liver disease rose from 6.8 to 9.9 between 1980 and 1993.

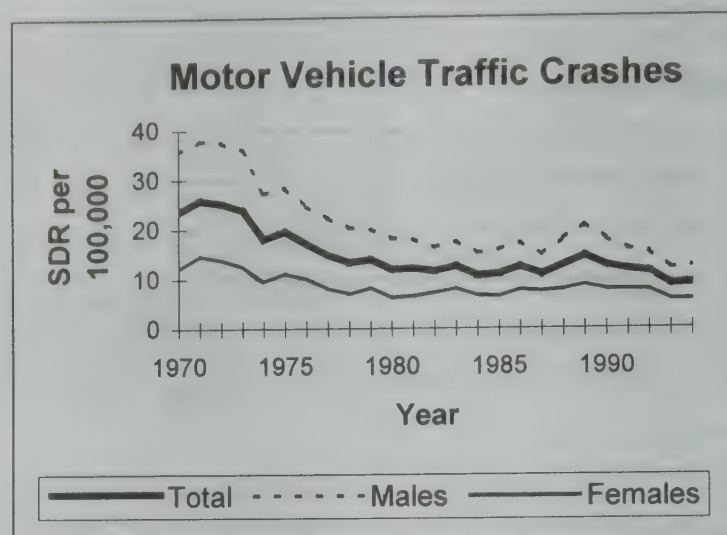


Morbidity

The rate per 100 000 population of treatment admissions for alcohol poisoning fell from 16.6 to 15.5 between 1989 and 1994.

Social problems

The rate per 100 000 population of alcohol-related motor vehicle traffic crashes rose from 17.1 to 23.9 between 1980 and 1993, in a period when overall deaths from motor vehicle crashes were falling (see chart below). The rate, per 100 000 population aged 15 years or older, of cautions and arrests for public drunkenness fell from 35.6 in 1990 to 22.5 in 1994. Arrests for drunkenness, per 1 000 litres of alcohol consumed, declined from 16 in 1960 to about 7 in 1980.



Alcohol policies

Control of alcohol products

From 1980 to 1987, the consumer prices of alcoholic beverages increased by 7.3 per cent in relation to the prices of other commodities. Taxation depends on the alcohol content of alcoholic beverages. The level of taxation is prescribed to be relatively high by law and the rates are approximately as follows: table wine, 56 per cent; beer (four to six per cent alcohol), 60 per cent; spirits, 87 per cent. The real price of alcohol is now decreasing.

Finland put an end to its production, import and export monopolies in 1995, following which the National Product Control Agency for Welfare and Health, under the Ministry of Social Affairs and Health, has been in charge of alcohol administration. The Agency is the authority for control of marketed products and monitors all production and distribution as well as issuing all required licences. Finland has a retail monopoly for alcoholic beverages (except fermented products under 4.7 per cent alcohol by volume) which functions under the control of the Ministry of Social Affairs and Health. A licence is required for wholesale, on-premises retailing of alcohol. A licence is also required for retailing beer and fermented alcoholic beverages under 4.7 per cent alcohol by volume. There are restrictions on hours and days of sale and on types of outlets (a state retail monopoly) and these are fairly effectively enforced.

It is prohibited to advertise, indirectly advertise or otherwise promote the sale of strong alcoholic beverages containing 22 per cent by volume of alcohol or higher. Advertising of alcoholic beverages containing less than 22 per cent alcohol is allowed under restrictive rules. General or specific health warnings are not required. Labels for alcohol content are required by official statute, and there is a maximum legal limit of 60 per cent for the alcohol content of beverage. There is legislation to create and support alcohol-free environments.

Control of alcohol problems

Priorities of the early 1990s have been: reducing availability; mass media campaigns to encourage safer drinking and to encourage lighter drinking in work settings; increasing the role of primary health care teams in the prevention and early detection of alcohol problems; using price policy to reduce demand; addressing particular alcohol problems; and carrying out surveys on drinking habits to develop statistical and information services on alcohol and drug problems.

There is a minimum legal age limit of 18 years for buying alcoholic beverages. Consumption during working hours is not permitted, and the Wage Agreement Act states that the worker may be dismissed if consumption interferes with work. The BAC limit is 0.05 g% for drivers, and this is quite effectively enforced. Random alcohol breath testing is frequently carried out (1 700 000 recorded in 1993). When a person is convicted of driving above the BAC limit suspension of drivers licence is common practice for a first offence. Imprisonment for second and subsequent offences is a possibility, but not usual. Some mass media, school-based and work place programmes deal with alcohol only while others deal also with tobacco and/or illicit drugs.

There are a number of national agencies dealing with the formulation and application of alcohol policies including the Department of Promotion and Prevention in the Ministry of Social Affairs and Health and several nongovernmental organizations. ALKO Ltd has an Alcohol Policy Planning and

Information Unit. The Ministry of Social Affairs and Health is responsible for coordination and monitoring of alcohol policies.

Alcohol data collection, research and treatment

The Social Research Institute for Alcohol Studies, the Finnish Foundation for Alcohol studies, The ALKO Biomedical Research Centre and the Research Unit on Alcohol Diseases at the University of Helsinki specialize in research on alcohol issues.

The psychiatric services have a limited role of long-term treatment and management of more complex alcohol-related cases with prominent psychiatric aspects, but the primary health care services are increasingly taking over both short-term intensive treatment, including detoxification, and longer term follow-up, often in collaboration with the social services. By the early 1980s, active Alcohol Anonymous groups had been established in 179 districts.

Residential alcohol services in Finland are estimated to consult approximately 20 000 clients each year with non-residential services consulting about 40 000. There are 63 non-residential alcohol clinics and eight clinics for young people with alcohol problems.

France

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	53 880 000	56 718 000	57 981 000
Adult (15+)	41 876 000	45 235 000	46 623 000
% Urban	73.3	72.7	72.8
% Rural	26.7	27.3	27.2

Health status

Life expectancy at birth, 1990-1995 : 73.0 (males), 80.8 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 24 990, PPP estimates of GNP per capita (current int'l \$), 1995: 21 030

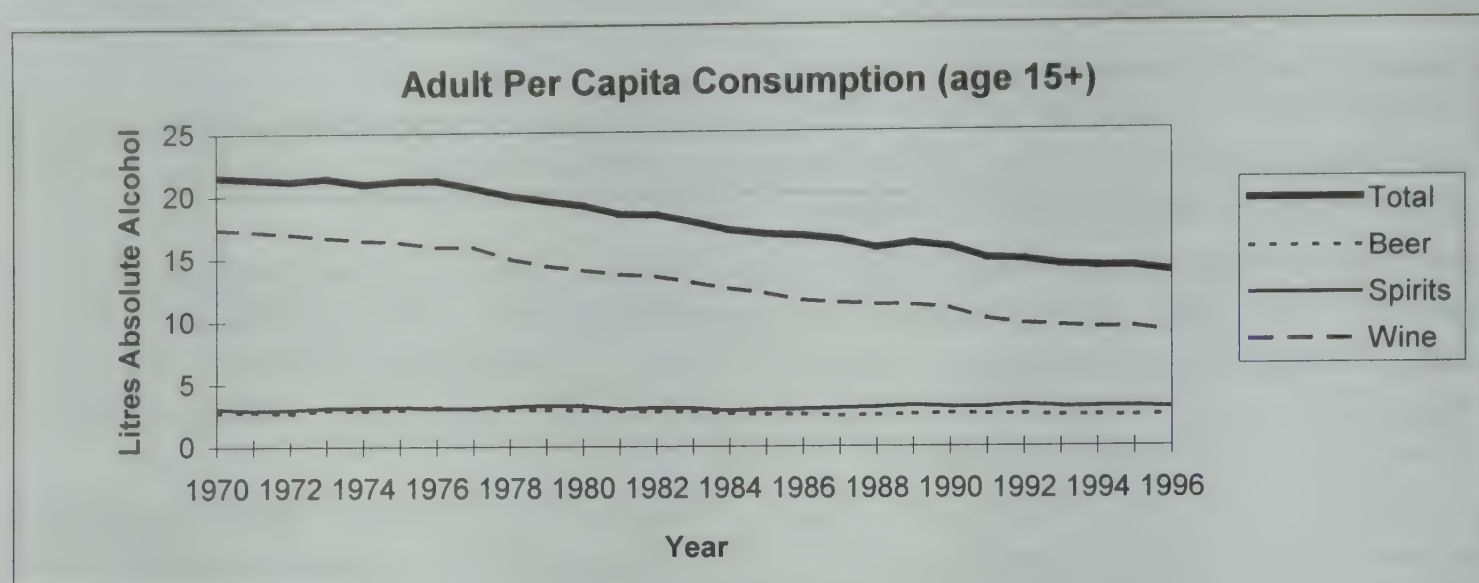
Average distribution of labour force by sector, 1990-1992 : agriculture 6%; industry 29%; services 65%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

France produces beer, distilled spirits and wine. The producer, Groupe Danone, dominates the beer market, followed by Heineken, and the top three producers sell more than two-thirds of the beer. In distilled spirits, the conglomerate Louis Vuitton Moët Hennessy (LVMH) dominates the world cognac trade. France's wine industry is not highly centralized. The largest is family-owned Castel Frères.

Alcohol consumption and prevalence



Consumption

Consumption of wine, the alcoholic beverage of choice, has declined steadily since the mid-1970s, while beer and spirits consumption have remained constant. Declared home production was 53 million litres of pure alcohol during 1974-1975, and 42 million litres of pure alcohol during 1975-1976. If these levels remained constant through 1996, this would be the equivalent of an additional 0.9 litres of absolute alcohol per adult, bringing total adult consumption to 14.63 litres.

Prevalence

A national survey of a representative sample of the population over 18 in November 1992 found that 7 per cent were lifetime abstainers, an additional 6.6 per cent abstained currently, 56 per cent drank once or twice a week at the weekend or less often, and 30.4 per cent drank every day or three to five times per week. Four times as many women abstain as men. On average, men drink twice as many drinks as women. Regarding drunkenness, 46.2 per cent say they have never been drunk, 44.6 have rarely been drunk, and 0.9 per cent get drunk frequently. In the past year, women on average had been drunk once, men 1.7 times, those aged 18 to 24 years 3.8 times, and those aged 25 to 34 years 1.5 times.

A 1988 study in Languedoc-Roussillon of a sample of the population aged over 15 years showed that 8.9 per cent of the sample had high levels of consumption (especially working class males aged 45 to 54 years), and 4.7 per cent seldom or never consumed alcoholic beverages.

Age patterns

In 1995, 65 per cent of young people between the ages of 12 and 18 drank alcohol, compared with 47 per cent in 1991. A WHO study in 1993/1994 of boys and girls aged 15 in the regions of Nancy and Toulouse showed that of boys, 88.9 per cent had tried alcohol, 38 per cent drank alcohol at least once a week, and 23.8 per cent had been drunk at least twice. Of girls, 89.9 per cent had tried alcohol, 17.5 per cent drank alcohol at least once a week, and 12.9 per cent had been drunk at least twice.

Alcohol use among population subgroups

In 1982, a survey was carried out in the region of Aquitaine among 4953 men aged 40 to 75 years. Representative urban and rural samples in each of the five sub-regions of Aquitaine were interviewed. The average daily consumption (mostly wine) was 95 grams. Of heavy drinkers (more than 150 grams pure alcohol), 25 per cent were agricultural workers (highest percentage), and five per cent were liberal professions (lowest percentage).

Economic impact of alcohol

Between 1991 and 1995, it is estimated that 1.5 per cent of the national Prevention Fund's annual contribution went to the prevention of alcohol dependence. In 1970 three per cent of the annual household expenditure was devoted to alcoholic beverages. This figure fell to 2.2 per cent in 1980, then to 2 per cent in 1984. In 1980, the estimated costs of alcohol-related problems in the workplace were FF 21 thousand million (US\$ 3.5 thousand million). In 1977, the estimated costs of alcohol-related traffic crashes were FF 73 thousand million (US\$ 12.1 thousand million).

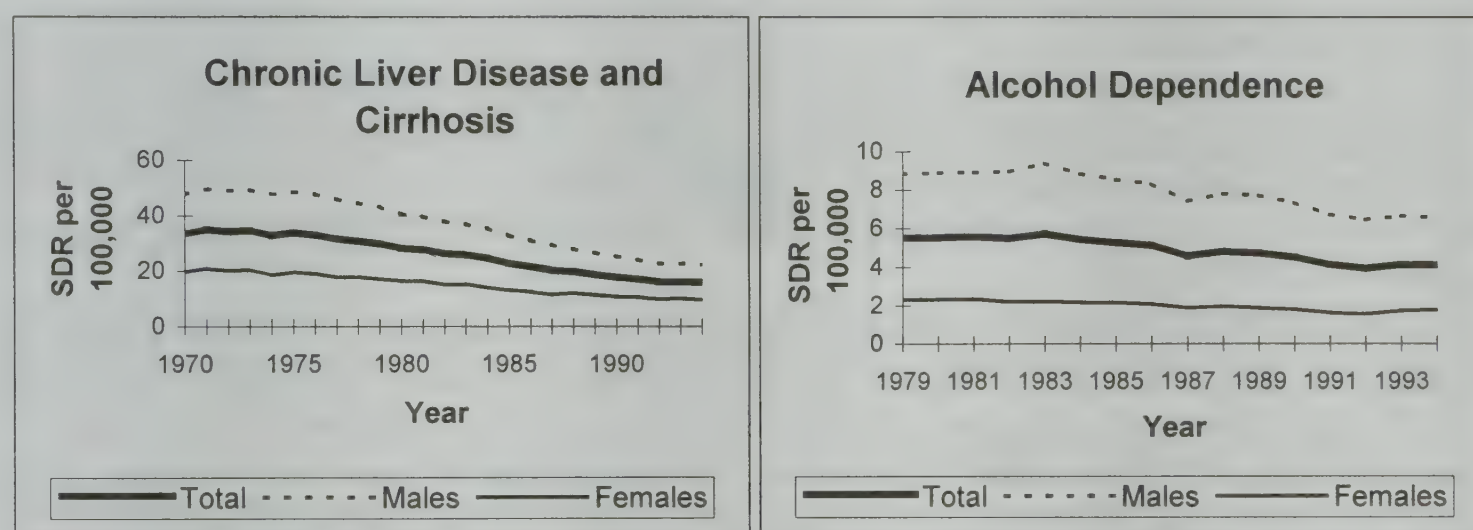
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

France ranks among the top quarter of countries reporting death rates from alcohol dependence. It is estimated that two million people are dependent on alcohol, and that five million experience difficulties of a medical, psychological and social nature because of their alcohol consumption. In 1980, alcoholic psychosis accounted for 34 per cent of all male admissions to psychiatric hospitals, and 8 per cent of all female admissions. There are no data available on admission rates per 100 000 population as France does not routinely collect morbidity statistics.

Mortality

The SDR per 100 000 population of all ages for chronic liver disease and cirrhosis fell from 33.4 (47.7 for males, 19.8 for females) in 1980 to 15.8 (22.3 for males and 9.6 for females) in 1994. Although the death rate has fallen, in 1991, 11 910 French people died as a direct result of excessive alcohol consumption, with diagnoses of alcohol dependence, alcoholic psychosis and cirrhosis. An additional 10 233 died from cancers of the upper digestive system linked to alcohol. An estimated one third of all motor vehicle crash deaths are attributable to alcohol. The excess mortality in French people under the age of 65, particularly males, is largely linked to alcohol consumption.

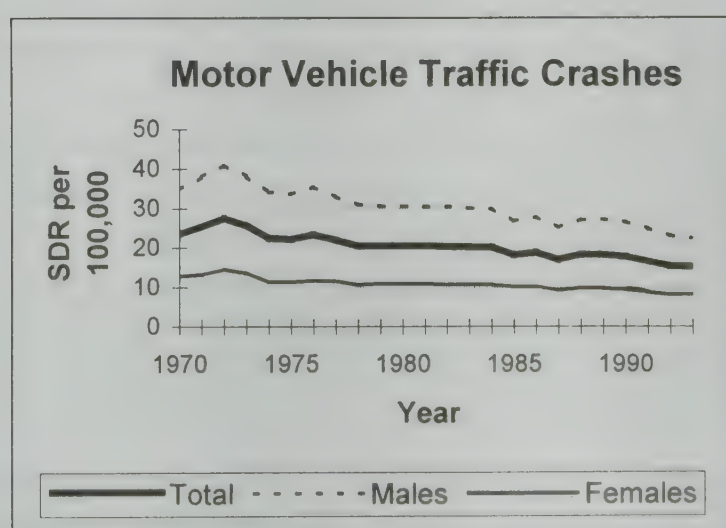


Health problems

In 1980, between 25 and 30 per cent of all male admissions to general hospitals, and between five and ten per cent of all female general hospital admissions were alcohol-related.

Social problems

The rate per 100 000 population of alcohol-related motor vehicle crashes fell from 303.8 to 297.3 between 1989 and 1992. Deaths from motor vehicle crashes have been falling as well during the 1990s.



Alcohol policies

Control of alcohol products

The real price of beer has been stable, with that of wine decreasing and of spirits increasing during the early 1990s. Table wines are taxed 22FF/hl (US\$ 3.68/hl), sparkling wines are taxed 54.8FF/hl (US\$

9.18/hl), beer (with alcohol content not exceeding 2.8 per cent alcohol by volume) is taxed 6.25FF (US\$ 1.04) /degree of alcohol/hl, other beer (with alcohol content more than 2.8 per cent alcohol by volume) is taxed 12.5FF (US \$2.09) /per degree of alcohol/hl and spirits (with a pure alcohol content greater than or equal to 40 per cent) is taxed 5125FF (US\$ 859.10) /hl pure alcohol.

Since 1987, no alcoholic beverage may be served to pupils in primary or secondary schools or at recreational facilities for children. Consumption at workplaces is limited to fermented beverages, the maximum quantity being specified by workshop regulations. Restrictions on hours of sale are determined by local authorities. There are no restrictions on days of sale or on location of outlets. It is forbidden to sell alcoholic beverages between 22:00 and 06:00 hours at petrol stations. There is a restriction on the establishment of new License IV outlets, i.e. those licensed to sell all types of alcoholic drinks. There is no state monopoly for the distribution and production of beer, wine and spirits but a declaration for taxation purposes is obligatory and a licence is required for distribution.

The advertising of beer, spirits and wine is banned on television and in cinemas and is restricted on radio, in newspapers, billboards and magazines (allowed in adult press only). Restriction generally means that the content of the advertising is regulated and that a health warning is obligatory. The maximum legal alcohol content limit is 18 per cent for wine-based aperitifs and 45 per cent for spirits. Labels for alcohol content are required by law.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcohol. The BAC limit is 0.08 g% for drivers, and anything over this limit is considered an offence. A level above 0.07 g% is considered a contravention and incurs a fine. On conviction for a first offence of driving above the permitted BAC it is usual to suspend a person's driving licence and/or to imprison him. Random alcohol breath testing is carried out, but infrequently.

The Alcohol and Public Health Committee of the High Committee of Public Health makes recommendations to the Ministry of Health in relation to alcohol issues. A special unit within the Ministry of Health develops policy and programmes in cooperation with the French Committee on Education for Health (CFES) and the National Association for Prevention of Alcoholism. The High Committee for Study and Information on Alcoholism (HCEIA) and Comité National de Defense Contre l'Alcoolisme (CNDCA) have the main responsibility for informing and educating the public on alcohol problems, with the assistance of other bodies such as the Pharmaceutical and Social Education Councils and the Scientific Nutritional Health Society. Priorities of the early 1990s included mass media campaigns to encourage safer drinking and addressing particular alcohol problems such as drinking and driving. The French Society of Alcoholology (FRA) develops contacts between members and organizations of various disciplines in the study of alcohol matters.

Alcohol data collection, research and treatment

HCEIA and the National Institute of Health and Medical Research (INSERM) together carry out biological, epidemiological and statistical research on alcohol use and problems. This joint programme includes a longitudinal study over many years of the development of alcohol consumption among young people. INSERM also collects national and regional data on mortality and morbidity from alcohol-related disorders. CNDCA collates and publishes information in its review "*Alcool ou santé*". The FRA contributes to the development of information and coordinates some multidisciplinary research. The Institute for Research on Beverages groups 12 producing societies that subsidise studies on alcohol and alcohol problems. Every ten years, the Statistics, Studies and Information Systems Service (INSEE) and the Research Centre for the Study and Monitoring of Living Conditions (CREDOC) make inquiries on health and medical consumption. INSERM and HCEIA are both involved in the collection of various types of data pertaining to alcohol.

The HCEIA has played an important role in developing education on alcohol in medical, paramedical and sociology courses. Some universities also have alcohol programmes. Since 1978, CNDCA has had a national training centre that provides courses for national and regional groups, hospital centres and social workers. In 1970, nutritional hygiene centres were established. Their number has since increased, and their field of activity has developed considerably.

Alcohol units are available in general hospitals, and other health centres and general services, but these are developing very slowly. Outpatient and inpatient units of psychiatric hospitals are often

poorly adapted to the treatment of alcohol dependent patients. There are some inpatient homes (cure establishments). Post-cure (rehabilitation) is carried out in post-cure centres, sometimes with the help of associations of treated alcohol dependents, of which there are 15, that work with a network of regional and local delegations. Legal provisions exist for the protection of the families of heavy drinkers, and alcohol dependents may be placed in institutions under a legal order as an extreme measure.

Georgia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	5 048 000	5 418 000	5 457 000
Adult (15+)	3 747 000	4 085 000	4 161 000
% Urban	51.7	56.0	58.5
% Rural	48.3	44.0	41.5

Health status

Life expectancy at birth, 1990-1995 : 68.5 (males), 76.7 (females)

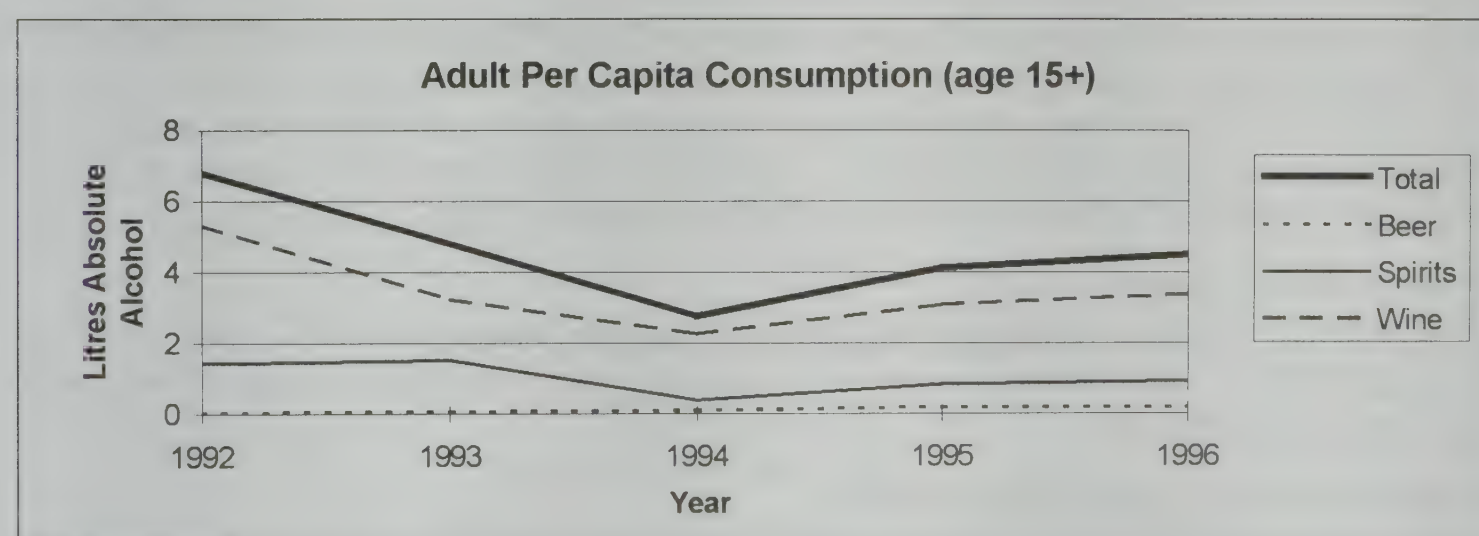
Infant mortality rate in 1990-1995 : 19 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 440, PPP estimates of GNP per capita (current int'l \$), 1995: 1470

Average distribution of labour force by sector, 1990-1992 : agriculture 14%; industry 30%, services 56%

Alcohol consumption and prevalence



Consumption

Historically, Georgia is a country of Mediterranean culture. Wine grapes are grown in all regions and almost every person in rural areas makes wine and grape vodka for personal consumption, and sometimes for sale. There is a special ceremony with toasts for drinking wine even when only two people are present. Drunkenness is considered shameful, and therefore rare. This custom is credited with keeping the prevalence of alcohol dependence low, and progression of the disease slow when it occurs. The other important factor is the pace at which alcohol is drunk and the quality of wine, which usually contains about 10 to 12 per cent alcohol. According to WHO's European office, adult per capita consumption of pure alcohol has fallen from its 1980 level of 9.5 litres. There are no data available on consumption of smuggled or home- or informally-produced or sold alcohol.

Economic impact of alcohol

Consumer expenditure on alcoholic drinks, as a percentage of general expenditure on purchase of goods and payments for services was 1.1 in 1991, compared to 1.3 the previous year.

Mortality, morbidity, health and social problems from alcohol use***Alcohol dependence and related disorders***

Georgia provides a good example of the influence of different drinking cultures on alcohol-related harm. There were about 33 alcohol dependent patients registered per 10 000 population in Georgia in 1984-1989 whereas there were about 190 registered in the former USSR. There were about 21 alcohol dependent patients registered per 10 000 of the native Georgian population during the period. Georgian alcohol rituals influence the non-native population; thus there are 28 alcohol dependents per 10 000 of the Armenians in Georgia compared to less than 20 among Armenians in Armenia. Among the Russian population in Georgia, there are about 120 alcohol dependents per 10 000, significantly less than in Russia. On the other hand, Georgian national peculiarities have almost no influence on the Azerbaijan population in Georgia which is Moslem, and has only four alcohol dependent patients per 10 000.

The rate of admission to inpatient treatment per 100 000 population for alcoholic psychosis was 1.4 in 1993, compared to 13.3 in 1980, 13.1 in 1985 and 10.5 in 1990.

Mortality

The SDR per 100 000 population (all ages) for chronic liver disease was at 25.2 in 1991 and 25.1 in 1992. Figures for earlier years are not available.

Social problems

The number of persons committing crimes under the influence of alcohol (thousands) decreased slightly from 1.5 in 1990 to 1.1 in 1993.

Alcohol policies***Control of alcohol products***

The real prices of beer and wine have remained stable and the real price of spirits decreased during the early 1990s. There are no restrictions on the sale of alcohol. General and specific health warnings are not required by law. Restrictions on advertising of all three types of alcohol, i.e. beer, spirits and wine are implemented by means of a voluntary code. Labels for alcohol content are required by law. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is no agency involved in prevention work at a national level. The BAC limit is 0.0 g% for drivers. A person's driving licence can be suspended for exceeding this. Random alcohol breath testing is frequently carried out.

Alcohol data collection, research and treatment

There are no research institutes which specialize in or have major responsibility for research on alcohol issues.

Georgia largely operates the treatment system it inherited from the Soviet administrative days: the treatment of alcohol and drug addicts in a system of narcological dispensaries and hospitals. In official statistics, the number of alcohol dependent patients has decreased from approximately 15 000 in 1987-1989 to about 12 000 in 1990-1992. It is considered by experts that this does not represent the real trend but is a result of the destruction of the treatment and medical systems. The absence of medicines and other important conditions for treatment of alcohol dependence have significantly reduced the number seeking medical treatment. There is some unofficial evidence that the situation in relation to alcohol use is worsening. According to private doctors and the police, alcohol-related morbidity is growing among young native people (under 30 years).

Germany

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	78 304 000	79 365 000	81 591 000
Adult (15+)	63 827 000	66 603 000	68 465 000
% Urban	82.6	85.3	86.6
% Rural	17.4	14.7	13.4

Health status

Life expectancy at birth, 1990-1995 : 72.7 (males), 79.0 (females)

Infant mortality rate in 1990-1995 : 6 per 1000 live births

Adult literacy rate (per cent), 1995 : more than 95

Socioeconomic situation

GNP per capita (US\$), 1995: 27 510, PPP estimates of GNP per capita (current int'l \$), 1995: 20 070.

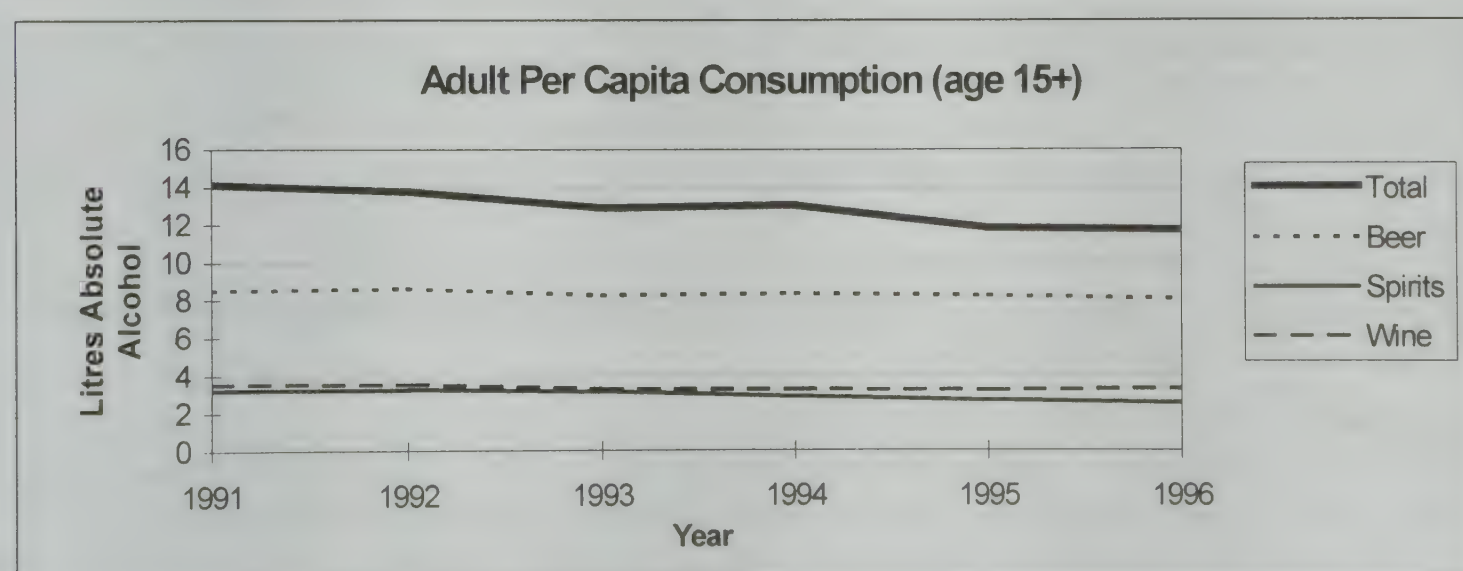
Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 39%; services 58%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

As of the late 1990s, Germany's 1278 breweries face growing competition as national beer consumption and income begins to decline. Brewers in Western, in particular, face declining sales as former East German breweries begin to modernize and to produce their own high-quality beer. Brewers are coping with these changes by laying off employees and increasing advertising expenditures. Importers find that it is hard to obtain a sizeable share of the German market because access is limited, profit margins are small, and Reinheitsgebot (purity laws which state that beer can only contain yeast, water, malt, and hops) are strict. In addition, per-capita consumption of beer remains at about 140 litres a year. While Reinheitsgebot is no longer enforceable by law, Germans have come to expect it of their beer.

Alcohol consumption and prevalence



Consumption

Alcohol consumption in Germany declined nine per cent from 1991 to 1995, according to the German Health Ministry. No quantified information is available on unrecorded consumption.

Prevalence

In 1995, a mail survey of 7833 respondents aged 18 to 59 years (response rate 65 per cent) found that, in West Germany, 16.3 per cent of males and 30 per cent of females consumed no alcohol. More than

19 per cent of males and 10.8 per cent of females consumed 11 to 20 grams of pure alcohol per day, 17.8 per cent of males and 6.5 per cent of females consumed 21 to 40 grams per day, and 7.4 per cent of males and 1.4 per cent of females drank more than 61 grams per day. In East Germany, 12.8 per cent of males and 20.8 per cent of females drank no alcohol. About 20.1 per cent of males and 14.7 per cent of females drank 11 to 20 grams of pure alcohol per day, 23.1 per cent of males and 7.2 per cent of females drank 21 to 40 grams per day, and 9.2 per cent of males and 1.3 per cent of female drank more than 61 grams per day. Wine was the preferred drink for lighter drinkers, whereas the more frequent drinkers preferred beer in both regions.

Age patterns

A 1993 study in the region of Nordrhein Westfalen found that 90.6 per cent of boys had tried alcohol by the age of 15. More than 25 per cent drank beer at least weekly and 33.7 per cent had been drunk at least twice. Of girls, 93.8 per cent had tried alcohol by the age of 15, 17.9 per cent drank beer at least weekly and 26.4 per cent had been drunk at least twice.

Economic impact of alcohol

The percentage of per capita income that was used for alcoholic beverages in the Federal Republic of Germany went from 5.5 in 1960 to 4.2 in 1970, and down to 2.2 in 1986.

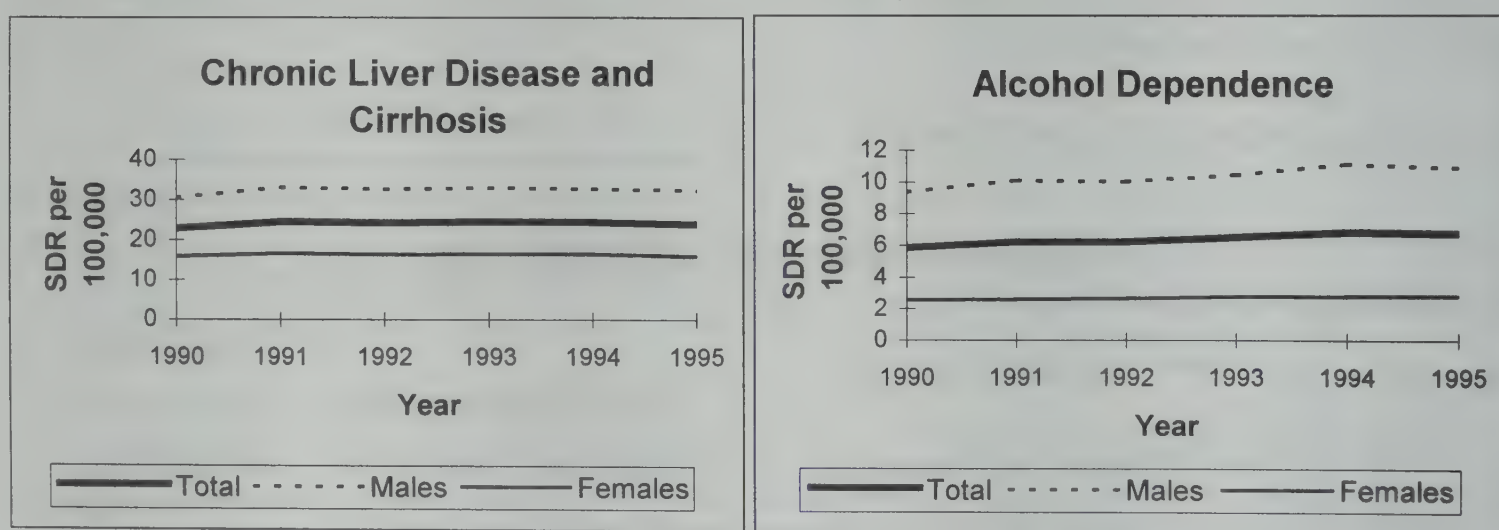
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1995, a mail survey of 7833 respondents aged 18 to 59 years (response rate 65 per cent) found that 15.1 per cent of males and 10 per cent of females in West Germany, compared with 20.5 per cent of males and 10.5 per cent of females in East Germany abused alcoholic beverages. A study conducted immediately after the opening of the Berlin wall found that four per cent of males aged 15 to 17 years, and 10 per cent of males aged 18 to 24 years were "at risk" from their drinking.

Mortality

In 1992 the SDR per 100 000 population for chronic liver disease was 31.5 in West Germany and 13 in East Germany. The SDR per 100 000 inhabitants from alcohol-related motor vehicle crashes in united Germany was 2.6 in 1992 and 2.5 in 1993.



Health problems

Persons with alcohol problems dominate admissions for alcohol and other drug treatment. Data from 86 facilities in the East Germany and 357 in West Germany became available in 1994. The data covers a total of 100 000 persons, 60 per cent of whom started treatment in 1994. In West Germany, 68.8 per cent of males and 44.5 per cent of females were treated for alcohol problems, compared to 93.3 per cent of males and 70.1 per cent of females in East Germany. The Stationäre einrichtungsbezogene Dokumentationssystem (SEDOS) report refers to 12 psychiatric hospitals, 41 special clinics for alcohol and medicament users, 18 special clinics for drug abusers and 11 centres for aftercare. In 78 per cent of the total numbers of clients, the most prominent cause of admission in 1994 was alcohol problems.

Social problems

The number of road traffic crashes involving alcohol per 100 000 population was 41 in 1991 and 50.7 in 1992.

Alcohol policies***Control of alcohol products***

The tax rate is calculated according to the alcohol content of the drink in question and not according to the price. In the case of beer, DM 3.18 (US\$ 1.78) in tax has to be paid per litre of pure alcohol independent of the price charged. The real prices of beer, wine and spirits remained stable during the early 1990s. There are no restrictions on hours or days of sale or on type or location of outlets. There is no state monopoly nor is a licence required for the production or distribution of beer, wine or spirits.

Advertising is governed by the Rules of Conduct of the German Advertising Standards Authority for Advertising of Alcoholic Beverages. General and specific health warnings are not required by law. There is no maximum legal limit for the alcohol content of beverages but labels for alcohol content are required by law.

Control of alcohol problems

There is a minimum legal age limit of 16 for buying beer and wine and an age limit of 18 for buying spirits. The BAC limit is 0.08 g% for drivers. The penalty for driving above the BAC limit depends upon the degree to which the limit is exceeded and on the consequences of the driver's intoxication (e.g. crashes). Random alcohol breath testing is carried out frequently. Regulations exist for professional drivers and for security reasons in workplace.

The Federal Centre for Health Education holds regular meetings on drug prevention with the regional agencies in order to coordinate national and regional prevention activities. The main coordinating body for government action in FDR was the Permanent Working Group on Drug Problems in the Federal Ministry for Youth, Family, Women and Health. This ministry also subsidized a nongovernmental body - the German Central Office against Addiction - whose membership included most of the non-profit organizations. The Federal Centre for Health Education within the Federal Ministry of Health also carries out mass media campaigns.

The German Association against Addiction is an umbrella organization for a number of associations against alcohol dependence and drug addiction. Health Insurance Offices are also involved in the prevention of alcohol problems. Programmes for the control of alcohol abuse were established in various regions of the German Democratic Republic and in large cities, under the responsibility of regional medical officers. An example is the programme adopted in Berlin in 1980, which developed a treatment and rehabilitation network.

Today, there are national alcohol programmes in the mass media and in schools which deal with substance use in general. There are no national alcohol education programmes in workplaces, but some companies organise education programmes themselves. In the FDR, special courses on alcohol problems were available for social workers, and many of those employed in treatment facilities have now undergone such training as "addiction therapists". Clinical psychologists received training on addictions, and alcohol problems figured in specialty training curricula for physicians (as part of psychiatry) and in their continuing education programmes.

Alcohol data collection, research and treatment

There were formerly two large documentation and information systems in FDR: EBIS (Einrichtungs Bezogenes Informations System: Provision of relevant information system), which was concerned mainly with outpatient settings, and DOSY for follow-up studies of inpatients. EBIS was developed in 1980 from the Tobacco Dependence Project Group of the Max Planck Institute of Psychiatry in Munich in collaboration with the EBIS - Working Group with the Financial Assistance of the National Ministry of Health for help concerning addictions. Since 1988 the EBIS-A System has covered about 500 consultant and treatment centres in the whole of Germany and in 1994 the documentation system became entirely computerised. Members of EBIS include representatives of the NGO, Caritas, the German Addiction Department, the Union for Addiction Help of the Evangelical Church and the

Institute for Therapy Research. Annual reports of EBIS are produced by the German Addiction Centre.

SEDOS (a system to collect data on inpatient facilities for substance abusers) was developed in 1992 on the basis of the DOSY + EBIS systems. A SEDOS working group , with assistance from the Ministry of Health brought together various organizations such as the nongovernmental organization, Caritas, the Evangelical Church and the IFT Institute for Therapy Research. Discussions held in 1993 led to the development of a programme in 1994 and a first annual report for that year.

In the FDR, withdrawal and detoxification were carried out mainly through medical wards of general hospitals and sometimes in specialized addiction treatment centres, of which there were more than 220. The stabilization of those under treatment for alcohol dependence took place in addiction treatment centres and in alcohol units of psychiatric hospitals. Psycho-social services were available in almost all cities and counties. Many large firms developed special programmes to help employees with alcohol problems. The German Council on Addictions had 910 outpatient counselling and treatment centres, 183 inpatient treatment facilities with about 7175 places (clinics and therapeutic communities), 209 transitional facilities with 2516 places, and 6550 self-help and temperance groups. These were fairly evenly distributed throughout the country.

Greece

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 643 000	10 238 000	10 451 000
Adult (15+)	7 443 000	8 295 000	8 702 000
% Urban	57.7	62.6	65.2
% Rural	42.3	37.4	34.8

Health status

Life expectancy at birth, 1990-1995 : 75.0 (males), 80.1 (females)

Infant mortality rate in 1990-1995 : 10 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 8210, PPP estimates of GNP per capita (current int'l \$), 1995: 11 710

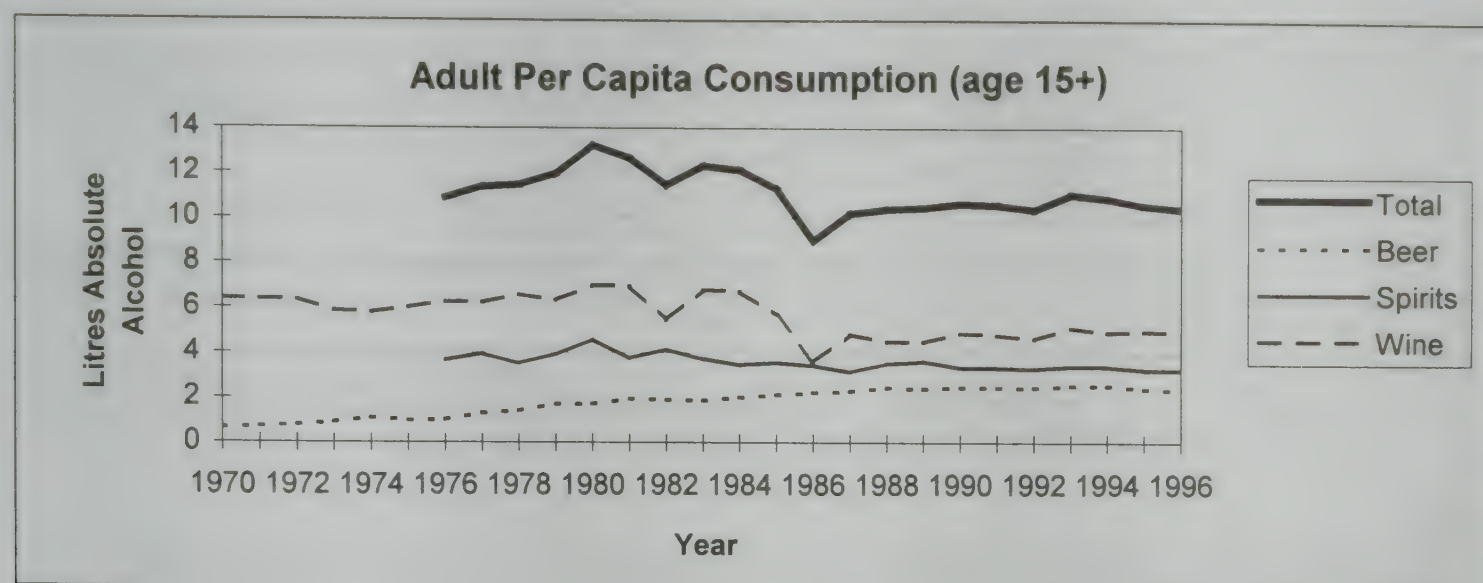
Average distribution of labour force by sector, 1990-1992 : agriculture 23%; industry 27%; services 50%

Adult literacy rate (per cent), 1995 : N/A

Alcohol production, trade and industry

In 1993 the Greek market followed a pattern of domestic volume declines and import gains. Traditionally, Greece has been primarily a wine-drinking country. Imported liquors, a very small portion of the spirits market before Greece joined the European Union in 1987, account for 48 per cent of the spirits market and seven of the country's top ten brands.

Alcohol consumption and prevalence



Consumption

Unrecorded consumption was an estimated 1.8 litres per capita in 1990, bringing total adult per capita consumption for that year to approximately 12.5 litres of absolute alcohol.

Prevalence

A 1984 nationwide general population survey of 4292 persons aged 12 to 64 years showed the prevalence of alcohol use ranged from 91 per cent to 97 per cent among males. The highest male prevalence rate was 97.6 per cent in the 25 to 64 years age group. Systematic drinkers, those who had been drinking more than 10 times in the previous 30 days, comprised 15 per cent and 8.4 per cent of males and females aged 12 to 17 years respectively, 42.2 per cent and 16.8 per cent of men and women aged 18 to 24 years respectively, and 53.7 per cent and 18.5 per cent of males and females between 25 and 64 years of age respectively.

Age patterns

Results of a 1993/1994 study show that 83.1 per cent of boys had tried alcohol by age 15, 8.3 per cent drank alcoholic beverages at least weekly and 46.3 per cent had been drunk at least twice. Of girls, 87.1 per cent had tried alcohol by age 15, 7.5 per cent drank alcoholic beverage at least weekly and 46.4 per cent had been drunk at least twice.

Economic impact of alcohol

A 1984 survey estimated that about 1.6 per cent of household monthly expenditure was for alcohol consumption, the percentage being higher in rural areas where much more drinking takes place outside the home in comparison to in urban areas.

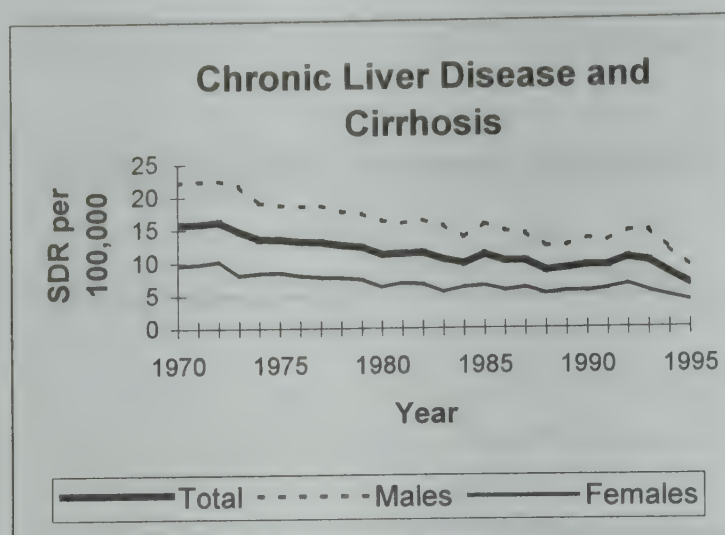
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The SDR per 100 000 population for alcoholic psychosis decreased from 20.1 to 13.3 between 1980 and 1991.

Mortality

The SDR per 100 000 population for chronic liver disease decreased from 10.6 to 8.2 between 1980 and 1993.



Morbidity

In 1981, there were 10.7 cases of treated alcohol-related disability per 100 000 population. A 1984 nationwide survey found untreated severe alcohol-related problems among 12.9 per cent of men aged 18 to 64 years and 2.1 per cent of women. A similar study conducted three years later, however, found 2.7 per cent and 0.4 per cent, respectively.

Social problems

A 1984 nationwide general population alcohol survey of 4292 persons aged 12 to 64 years showed that 14 per cent of those between 18 and 24 had experienced two or more alcohol-related psycho-social problems. Twice as many males as females in the 12 to 17 year age group had experienced two or more such problems (10.7 per cent and 5.1 per cent, respectively). Among 18 to 24 year olds, the difference increased to nearly four times as many males as females (24.5 per cent and 6.2 per cent, respectively), while among 25 to 64 year olds, nearly six times as many males as females had experienced two or more alcohol-related psycho-social problems.

Alcohol policies

Control of alcohol products

Table wines are taxed at a rate of 30 per cent, beer (four to six per cent pure alcohol) is taxed 15 per cent and spirits (over 35 per cent proof) are taxed 54 per cent and four per cent of the value as stamp duty. The real prices of all types of alcoholic beverage have been increasing during the early 1990s.

There are no restrictions on hours or days of sale or on type or location of outlets. There is no state monopoly and no licence is required for production or distribution of alcohol.

There are no restrictions on advertising in the media. Labels for alcohol content are required by law. The maximum legal limit for the alcohol content of beer is five to seven per cent. The maximum legal limit for wine is 11.5 to 12 per cent, and the limit for spirits is 40 to 42 per cent.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcoholic beverages in public drinking places such as bars and discos. There is no statutory public age for drinking. The BAC limit is 0.08 g% for drivers. On conviction for a second offence of driving above the permitted BAC, it is usual for a person's driving licence to be suspended. Random alcohol breath testing is carried out infrequently.

Some developments in policy were introduced in the early 1990s as a result of an increasing number of surveys on drugs which usually included alcohol, as well as increased awareness of drug problems which also often involve alcohol. There is no national agency devoted specifically to prevention of alcohol problems, but it is included in the work of the Organization Against Drugs. This organization is responsible for the formulation of policies on prevention, treatment, rehabilitation and research on alcohol, drugs and tobacco. Scientists and representatives of seven ministries are members of this organization.

In the early 1990s, the priorities of the Organization Against Drugs had been to encourage lighter drinking in work settings; develop specialized treatment for alcohol dependence and other alcohol problems and address particular alcohol problems such as drinking and driving. There is a movement towards having a joint approach to issues related to alcohol, drugs and tobacco.

Alcohol data collection, research and treatment

Since 1980, nine Therapeutic Community settings and three specialized outpatient clinics for dependencies (including alcohol) have been established, mainly in Athens and Thessaloniki, and 45 outpatient clinics have been operating in general hospitals.

Hungary

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	10 707 000	10 365 000	10 115 000
Adult (15+)	8 358 000	8 268 000	8 281 000
% Urban	56.9	62.0	64.7
% Rural	43.1	38.0	35.3

Health status

Life expectancy at birth, 1990-1995 : 64.5 (males), 73.8 (females)

Infant mortality rate in 1990-1995 : 15 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 4120, PPP estimates of GNP per capita (current int'l \$), 1995: 6410.

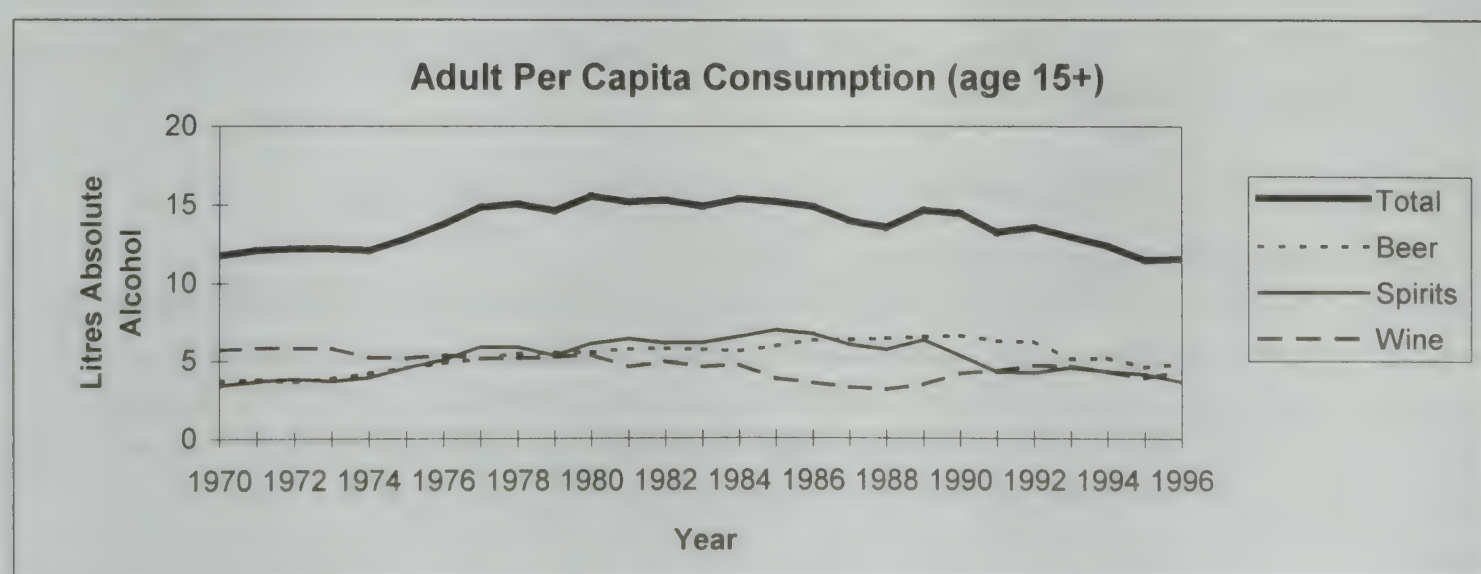
Average distribution of labour force by sector, 1990-1992 : agriculture 15%; industry 31%; services 54%

Alcohol production, trade and industry

Hungary produces beer, distilled spirits and wine. Zwack Unicum, producer of a unique Hungarian distilled beverage, has a 54 per cent share of Hungary's legal spirits market.

By acquiring two local brewers, Kobanya and Kanizsa, and combining them into one company, called Dreher Sorgyarak. South African Breweries became the country's largest brewer, controlling 38 per cent of the Hungarian market. In 1994, the International Finance Corporation announced plans to loan US\$ 6.8 million to Hungarian brewer Albadomu Malatermelo Es Kereskedelmi BT to build a malt production factory and to buy a silo complex. In 1996, Hungary's Borsod Brewery, owned by Belgium-based Interbrew, became the first brewery to brew an American beer (Rolling Rock).

Alcohol consumption and prevalence



Consumption

Beer has narrowly surpassed spirits to become Hungary's alcoholic beverage of choice in recorded consumption. Widespread illegal home brewing throughout the 1970s and 1980s led to increased

control and punishment in the mid-1980s. During the late 1990s, political changes and border openings have been followed by a decline in home brewing and a sharp increase in spirit smuggling from Romania and Serbia. In 1980, the estimated unrecorded consumption, in terms of litres of pure alcohol per capita (total population), was 1.5. This figure dropped to 1 in 1985 and then rose to 2.5 by 1995.

Prevalence

The first national survey of drinking among a representative sample of 6000 adults took place in 1985-1986. The survey found that over the preceding six months, 6.6 per cent of men never drank, 12.2 per cent drank occasionally, 19.8 per cent drank moderately, 18.8 per cent drank regularly, 10.6 per cent were problem drinkers and 14.1 per cent were heavy drinkers. Of women, 21.4 per cent never drank, 35.7 per cent drank occasionally, 14.1 per cent were moderate drinkers, 3.5 per cent were regular drinkers, 1.6 per cent were problem drinkers and 0.8 per cent were heavy drinkers (no definition provided).

Age patterns

A study of 2571 15 to 16 year olds (1199 boys and 1372 girls) was carried out in 1995. The response rate was 89 per cent (88 per cent for boys and 89 per cent for girls). Eighty per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 40 per cent had drunk to intoxication in the last 12 months.

A 1993/1994 sample of 15 year olds showed that 93.3 per cent of boys and 93.6 per cent of girls had tried alcoholic beverages, 22.8 per cent of boys and 13.4 per cent of girls drank at least once a week, and 35.5 per cent of boys and 19.7 per cent of girls had been drunk at least twice. Based on a sample of 17 055 secondary school students, most of whom were age 16, a 1995 survey concluded that 21.4 per cent of boys and 7.4 per cent of girls had had five or more drinks on three or more occasions during the past 30 days. Approximately 44.3 per cent of boys and 54.5 per cent of girls had had no alcoholic drinks during the past 30 days.

Alcohol use among population subgroups

A study was conducted in 1995 among 615 Palocs, an ethnic minority in Hungary. Data were collected through interviews and questionnaires. About 9.1 per cent of males and 30.8 per cent of females were abstinent at the time of the study. Four to five times more females than males were light drinkers (one or two times per week). More than 90 per cent of the Paloc males drank daily. Females tended to drink brandy while males drank more beer. The total alcohol consumption of males was 2.8 times higher than that of females, and 53 per cent of males were heavy drinkers (no definition).

Economic impact of alcohol

In 1984, approximately 11.3 per cent of the population's income was spent on alcoholic beverages, compared with 10.8 per cent in 1970.

The mean value of economic losses due to alcohol dependence grew approximately tenfold, from US\$ 15 million in 1970 to US\$ 151 million in 1989. It is estimated that about US\$ 35.4 million was spent in 1989 on alcoholic-handicap allowance.

Mortality, morbidity, health and social problems from alcohol use

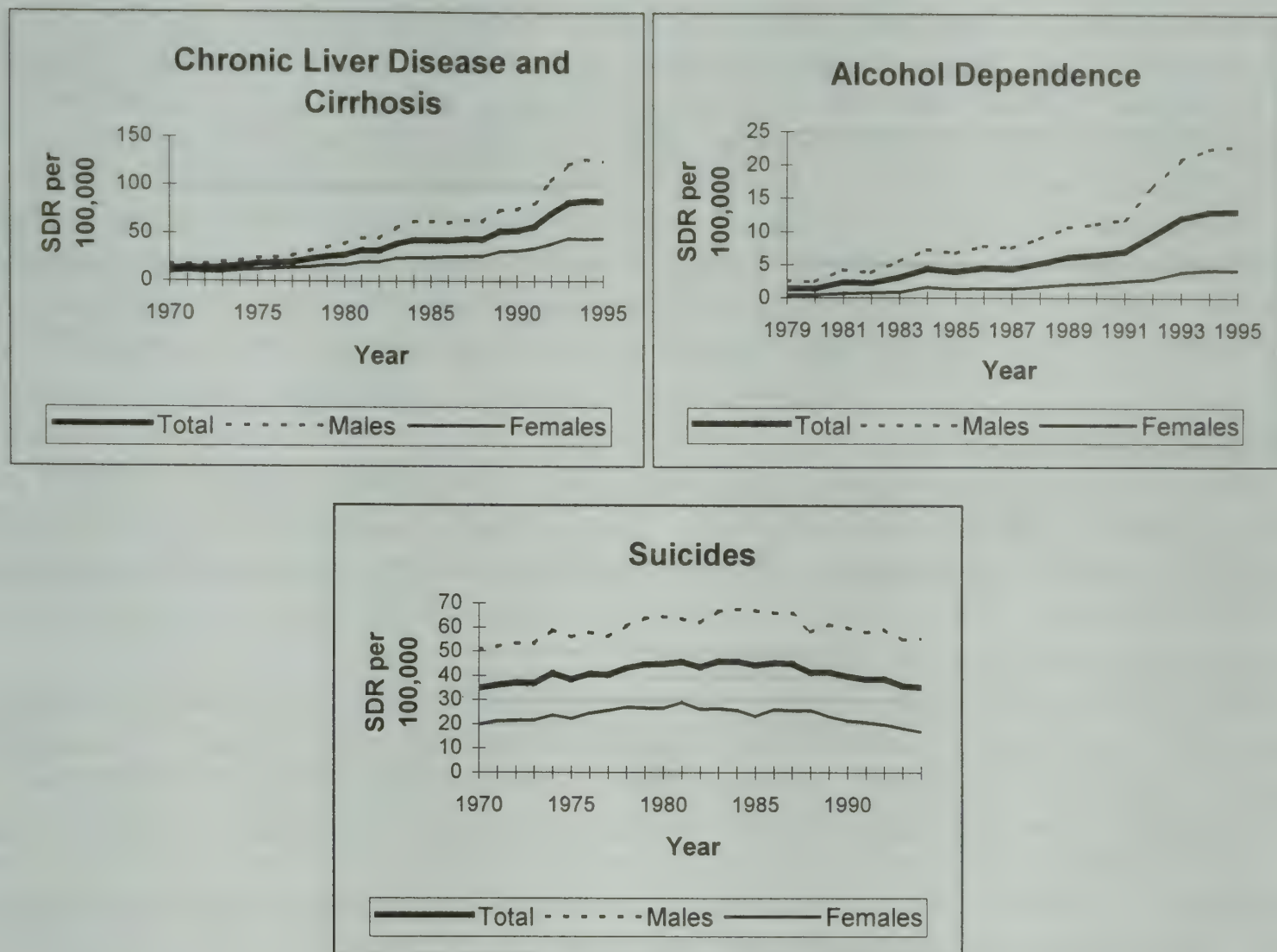
Alcohol dependence and related disorders

Death rates per 100 000 population for alcohol dependence have risen very rapidly during the 1990s, to the point where Hungary now reports the world's second highest death rate from alcohol dependence. Death rates per 100 000 population for alcoholic psychosis rose from 0.2 to 0.5 between 1980 and 1993, while the number of registered patients per 100 000 population with alcoholic psychosis in psychiatric dispensaries increased from 1089 in 1970 to 2610 in 1994.

Mortality

The mortality rate per 100 000 population of alcohol-related causes of death rose from 14.5 to 67.2 between 1980 and 1993. The SDR per 100 000 population for chronic liver disease rose from 27.4 to 78.9 during the same period. Liver cirrhosis rates have doubled over the past ten years, to become the

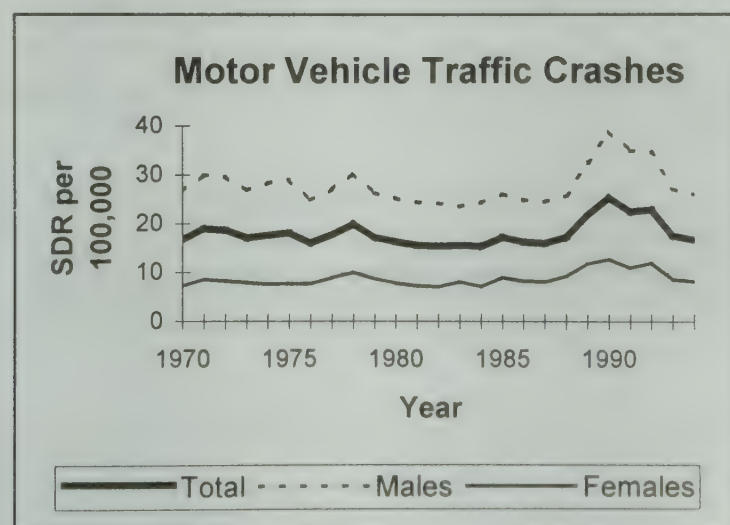
most common cause of death for men aged 15 to 64. This increase is due primarily to alcoholic cirrhosis.



Trends in per capita consumption and the overall suicide rate in Hungary during the period 1950 to 1990 are very highly correlated. From about 1955 to 1980 there was a steady and almost linear growth in both variables, both increasing almost threefold. During the first half of the 1980s both alcohol consumption and suicide rates stabilized, and during the second half of the 1980s there was a slight recession, the decrease being most significant for suicide.

Social problems

The number of people fined for "scandalous drunkenness" fell from 21 475 in 1965 to 19 299 in 1975, to 17 251 in 1985 and down to 6971 in 1994. The number of persons fined for drunken driving remained fairly constant between 1965 and 1975, falling from 7999 to 7708, then rising to 12 187 in 1985, and falling again to 8385 in 1994.



Alcohol policies

Control of alcohol products

The anti-alcohol policy of the mid-1980s in the former Soviet Union influenced policy in satellite states such as Hungary. The government introduced several measures to limit alcohol consumption in public places and to limit availability of alcoholic beverages generally. A committee on alcohol dependence was upgraded as a State Committee and granted significantly more operational funds. Since the political changes of 1989, the limitations and restrictions have been gradually abolished and the committee and the regional network of anti-alcohol organizations have been re-arranged as structures and local units of health promotion. In the meantime the national sales monopoly on alcohol has ceased to be an active force, partly because private and local sales units can operate without control and partly because large amounts of alcohol are reportedly being smuggled into the country.

Control of alcohol problems

Measures to limit consumption in streets and public places were introduced in the mid-1980s but are no longer enforced. The BAC limit is 0.0 g%. A few schools include consideration of alcohol in school health promotion programmes. There have been one or two experimental programmes in workplaces.

Alcohol data collection, research and treatment

The Sober Life Association and the Central Statistical Office, as well as the Institute of Sociology in Budapest, have done much to compile data on trends and consequences of alcohol consumption in Hungary. In addition, the Central Statistical Office has carried out mortality studies concerning alcohol dependence and investigated various indices of alcohol problems on a statistical level and within the comprehensive framework of health status and mortality, as well as performing economic investigations and making computer simulations of programmes designed to reduce the availability of alcohol. Individual health professionals have made great efforts to develop research and information services and most of the materials of the European Alcohol Action Plan have been translated into Hungarian.

There were about 50 000 people under outpatient care for alcohol problems in 1982. In 1995, nearly 18 000 alcohol dependents were under care in Budapest outpatient services. By 1985, there were independent alcohol departments in 17 of the 19 counties in Hungary within departments of psychiatry. There were closed and open facilities, and treatment included biological, social and psychological care. There were some departments for work therapy rehabilitation, with 2000 beds. The 106 outpatient dispensaries for alcohol dependents collaborated with the alcohol departments and with the anti-alcoholic clubs, which were started in the late 1950s. By 1980, there were 20 such clubs and 100 in 1988.

After 1989, the compulsory treatment system began to disintegrate, the special work therapy institute was closed down, and a new mental health law was drafted to end compulsory alcohol withdrawal treatment. Only about ten per cent of the country's chronic drinkers are currently registered in state-run rehabilitation centres according to the Central Statistics Office. Treatment and care are carried out mainly in outpatient services.

The Sober Life Association and Blue Cross are both involved in aid to alcohol dependent persons within the community. In 1985, the National Club Committee and the first Alcoholics Anonymous club for young people were started. Alcoholics Anonymous currently has more than 150 clubs.

Iceland

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	228 000	255 000	269 000
Adult (15+)	165 000	191 000	204 000
% Urban	88.2	90.6	91.6
% Rural	11.8	9.4	8.4

Health status

Life expectancy at birth, 1990-1995 : 75.8 (males), 80.8 (females)

Infant mortality rate in 1990-1995 : 5 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 24 950, PPP estimates of GNP per capita (current int'l \$), 1995: 20 460

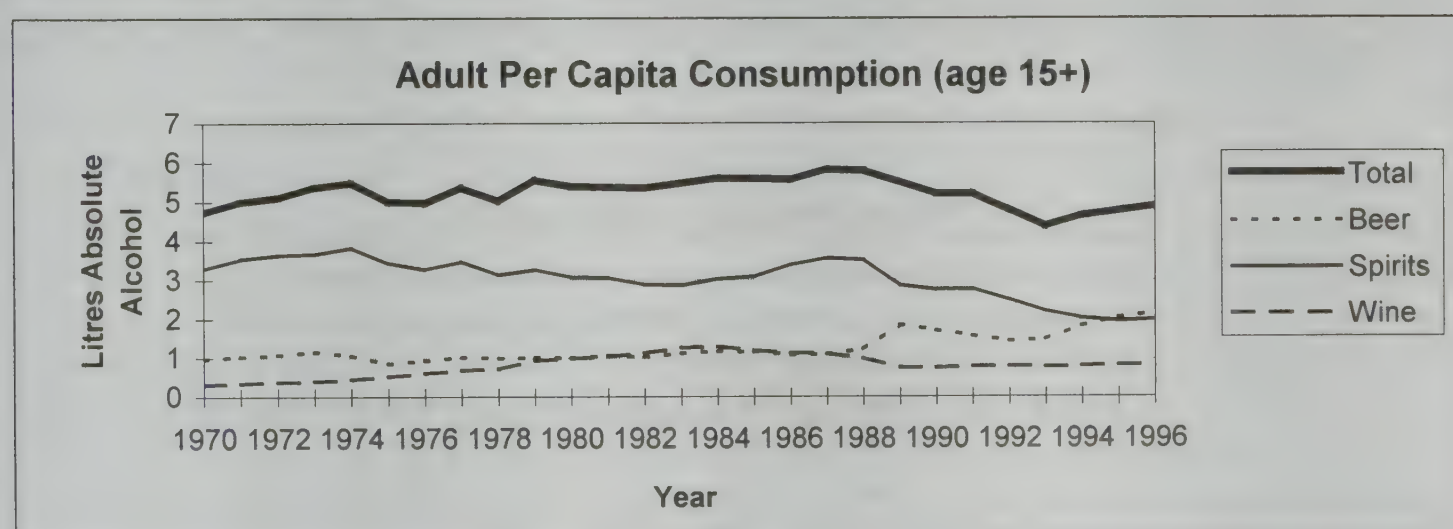
Average distribution of labour force by sector, 1990-1992 : agriculture 11%; industry 26%; services 63

Adult literacy rate (per cent), 1995 : N/A

Alcohol production, trade and industry

Iceland produces beer and spirits, and imports wine.

Alcohol consumption and prevalence



Consumption

Estimated unrecorded consumption is about 1.05 litres of pure alcohol per capita if beverages with a lower alcohol content than 2.25 per cent are included: excluding these gives an unrecorded consumption of 0.67 litres (estimates of tax free alcohol sales, home production and smuggled alcoholic beverages). This would imply that total consumption of alcohol above 2.25 per cent was 5.55 litres per adult in 1996. Beer consumption has risen notably since the repeal of the prohibition on sale of strong beer in 1989. A concomitant decrease in recorded spirits consumption is discernible.

Prevalence

A 1992 mail survey of a random sample of 1000 Icelanders found that 8.1 per cent of men and 1.6 per cent of women drank five or more litres of pure alcohol during the previous six months. A survey of a representative sample of the population aged 20 to 49 in 1984 found that approximately 30-50 per cent drank less than once a month or two to four times per month, and 3.3 per cent drank more than four times per month. On average, males used 8.7 units per occasion, while females drank 4.5 units.

Age patterns

A study of 3814 15 to 16 year olds (1931 boys and 1878 girls) was carried out in 1995. The response rate was 87 per cent (86 per cent for boys and 88 per cent for girls). Seventy-two per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 60 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 79 per cent (78 per cent for boys and 80 per cent for girls).

Questionnaires were sent to random samples of school pupils aged 15-16, 17-18, and 19-20 in 1984 and 1986 (nearly 2000 responses each time). Alcoholic beverages were used by 85 per cent and 87 per cent of students in the respective years. Each time about 90 per cent of the drinkers said they had often been intoxicated and a majority had experienced a loss of consciousness in connection with drinking.

Economic impact of alcohol

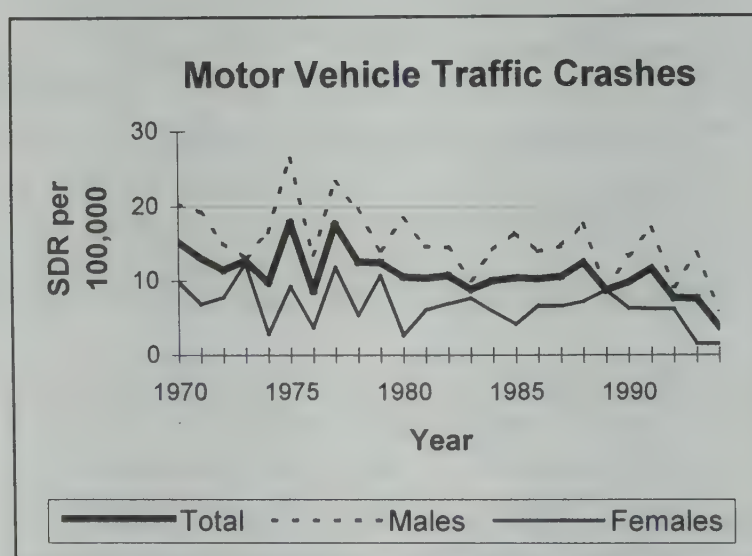
In 1993, 3.1 per cent of private consumer expenditure went towards alcoholic beverages. In 1986 the mental hospital spent US\$ 2.1 million on the treatment of alcohol dependents and their families. Other centres spent US\$ 3.4 million.

Mortality, morbidity, health and social problems from alcohol use**Alcohol dependence and related disorders**

The rate of admission to inpatient treatment for alcoholic psychosis was 8.8 in 1989. There has been an increase in persons seeking inpatient treatment of alcohol dependence since 1980, while utilization of outpatient treatment has been relatively stable.

Social Problems

The rate per 100 000 population (15 years and older) of cautions and arrests for driving under the influence of alcohol steadily decreased between 1990 and 1994, from 12.8 to 9.7. The number of road traffic accidents involving alcohol per 100 000 population was 20.3 in 1992, less than half the 43.5 recorded in 1985.

**Alcohol policies****Control of alcohol products**

The real price of beer has been decreasing and the real prices of wine and spirits have been increasing during the past five years. A resolution of the Icelandic Parliament in 1991 stated that the price of alcoholic beverages should be gradually increased over the next five years in excess of general price increases and that the price of strong liquor should be increased to a greater extent than the price of wine and beer. Table wines are taxed 45 per cent, beer (four to six per cent alcohol) is taxed 70 per cent, and spirits (over 35 per cent proof) are taxed 90 per cent.

Prohibition, with the general consent of the population, came into effect in Iceland in 1915, but was repealed in the 1930s. A government monopoly over production and distribution of alcoholic beverages was established in the 1920s. Today, there are restrictions on hours and days of sale and on

types and location of outlets. The number of outlets run by the monopoly doubled between 1979 and 1992 (growing from nine to 21) and the number of licensed restaurants increased sevenfold during the same period (from 34 to 253). Prior to March 1989, the sale of strong beer (over 2.25 per cent by volume) was illegal.

The advertising of beer, wine and spirits on television, radio, newspapers/magazines, billboards and in cinemas is banned. Labels for alcohol content or health warnings are not required by law, and there is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 20 years for buying alcoholic beverages. Intoxication in public places is illegal under the Alcohol Act. The BAC limit is 0.05 g% for drivers. It is usual to suspend a person's driving licence upon conviction for a first offence of driving above the limit. Random alcohol breath testing is not carried out. The Liquor Prevention Council distributes educational programmes, and there are school-based programmes that deal with alcohol and other substances. Some mass media programmes deal with alcohol only while others also deal with other substances.

Alcohol data collection, research and treatment

The Committee on Alcohol Problems (CAP), comprising 17 members, was appointed by the government following a 1980 resolution demanding an official policy on alcohol-related matters. The Alcohol Committee's proposals have included a draft law aimed at reducing alcohol consumption and more general preventive measures under the control of a coordinating alcohol prevention board, with alcohol prevention committees in towns and cooperative committees in communities. Priorities of the early 1990s have been mass media campaigns to encourage safer drinking; using price policy to reduce demand; developing specialized treatment for alcohol dependence and other alcohol problems; and addressing particular alcohol problems. There is a movement towards having a joint approach to issues related to alcohol, drugs and tobacco.

The Department of Psychiatry at the National University Hospital, and the Icelandic Institute for Educational Research have the primary responsibility for research on alcohol issues. Professional training in alcohol problems prevention and treatment is undertaken at all levels, at home and abroad, but heads of programmes are legally required to have diplomas from valid schools.

In the mid 1980s there was a considerable emphasis on the treatment of alcohol dependents through hospitals and agencies: there were 400 beds, i.e. one bed per 500 population. Outpatient facilities were also available as well as treatment through Alcoholics Anonymous and similar groups. An interest has been shown in developing earlier diagnosis and treatment of alcohol problems at the primary health care level. The National Psychiatric Hospital and the Laymen's Council on Alcoholism have detoxification and rehabilitation facilities, and the former has a long-term treatment farm. For chronic alcohol dependents, there are shelters, half-way houses and a resident institution. "Blue Ribbon" has a combined rehabilitation house and a home for senior citizens. Alcoholics Anonymous runs about 200 groups and Al-anon 30 groups. There are services for the counselling and treatment of relatives of people with alcohol problems.

Ireland

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 401 000	3 503 000	3 553 000
Adult (15+)	2 360 000	2 546 000	2 684 000
% Urban	55.3	56.9	57.5
% Rural	44.7	43.1	42.5

Health status

Life expectancy at birth, 1990-1995 : 72.6 (males), 78.1 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

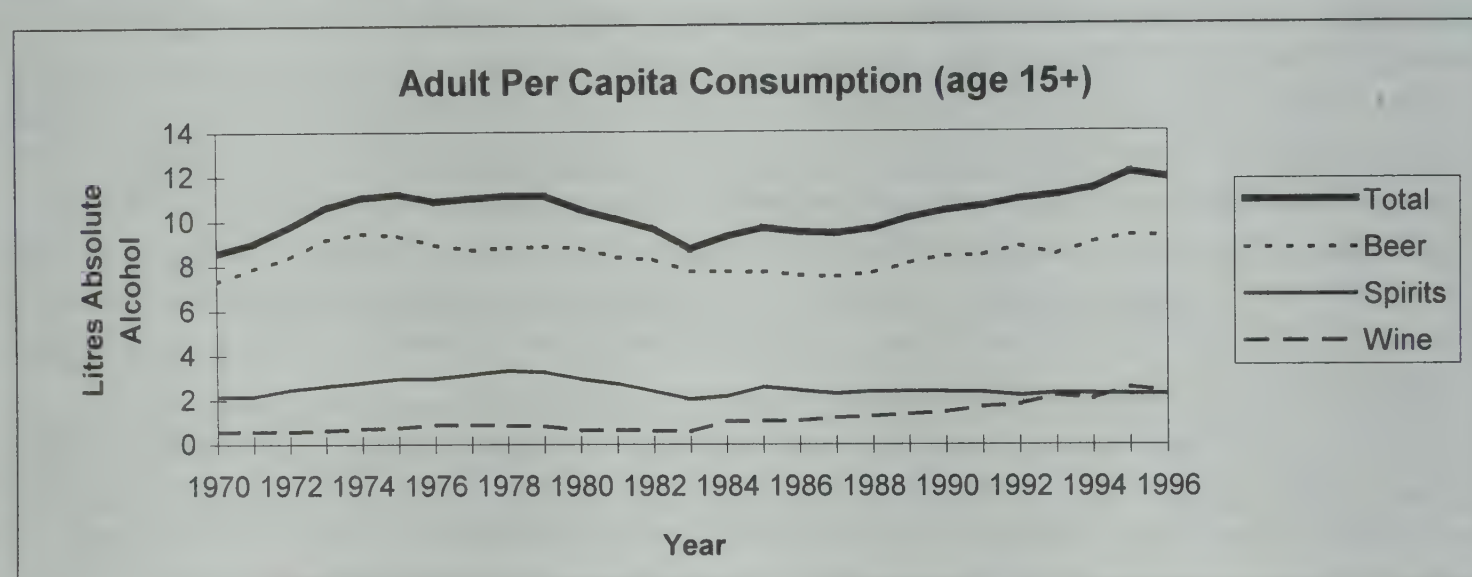
GNP per capita (US\$), 1995: 14 710, PPP estimates of GNP per capita (current int'l \$), 1995: 15 680
Average distribution of labour force by sector, 1990-1992 : agriculture 14%; industry 29%; services 57%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Ireland produces beer and spirits, and imports wine. The major brewer, Guinness, is the world's 14th largest and also dominates the spirits trade through its subsidiary, United Distillers. Guinness recently announced plans to merge with Grand Metropolitan to form the world's largest drinks conglomerate, Diageo.

Alcohol consumption and prevalence



Consumption

Little is known about the extent of illegal production. Beer is the alcoholic beverage of choice, and total consumption tends to follow trends in beer consumption. The wine category above includes cider and perry (fermented beverages popular in Ireland and made from apples and pears respectively) from 1984 onwards.

Prevalence

A 1990 survey of people aged 15 years and over found that five per cent of the sample drank alcohol at least three to four days per week, 40 per cent were moderate consumers and 54 per cent drank less than weekly or not at all. No detailed national survey of the drinking habits of adults has been carried out since 1980. At that time 11 per cent of males were classified as heavy drinkers (drinking more than 50 units of alcohol a week), while one per cent of females were classified as heavy drinkers (drinking more than 35 units of alcohol a week).

Age patterns

A study of 1849 15 to 16 year olds (907 boys and 942 girls) was carried out in 1995. The response rate was 96 per cent. Eighty-six per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 66 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 91 per cent for both boys and girls.

A 1990 survey showed that zero per cent of boys aged 11 to 12 years drank alcohol weekly, compared with one per cent of girls. In the 13 to 15 year age bracket, the percentage of girls drinking weekly remained at one per cent, while the percentage of boys rose to two per cent. Surveys of comparable samples of 2000 post-primary students in Dublin in 1984 and 1991 indicate that, among boys, the percentage who have ever drunk alcoholic beverages rose from 74 per cent to 83 per cent, while girls remained stable at 57 per cent. In 1991 the percentage of boys who were regular drinkers by the age

of 15 was 36, compared with 22 per cent of girls. By age 17, 63 per cent of boys and 40 per cent of girls were regular drinkers.

Economic impact of alcohol

Personal expenditure on alcohol amounted to IR£ 2.08 billion (US\$ 2 900 000 000) in 1993 and IR£ 2.34 billion (US\$ 3 300 000 000) in 1994. Excise duty on alcohol is still a substantial source of revenue, though in real terms it has declined somewhat since the early 1980s. It totalled more than IR£ 495.5 million (US\$ 699.75 million) in 1994.

About 33 000 full time and about 48 000 part time jobs are attributable to the entire alcohol industry and drinks trade.

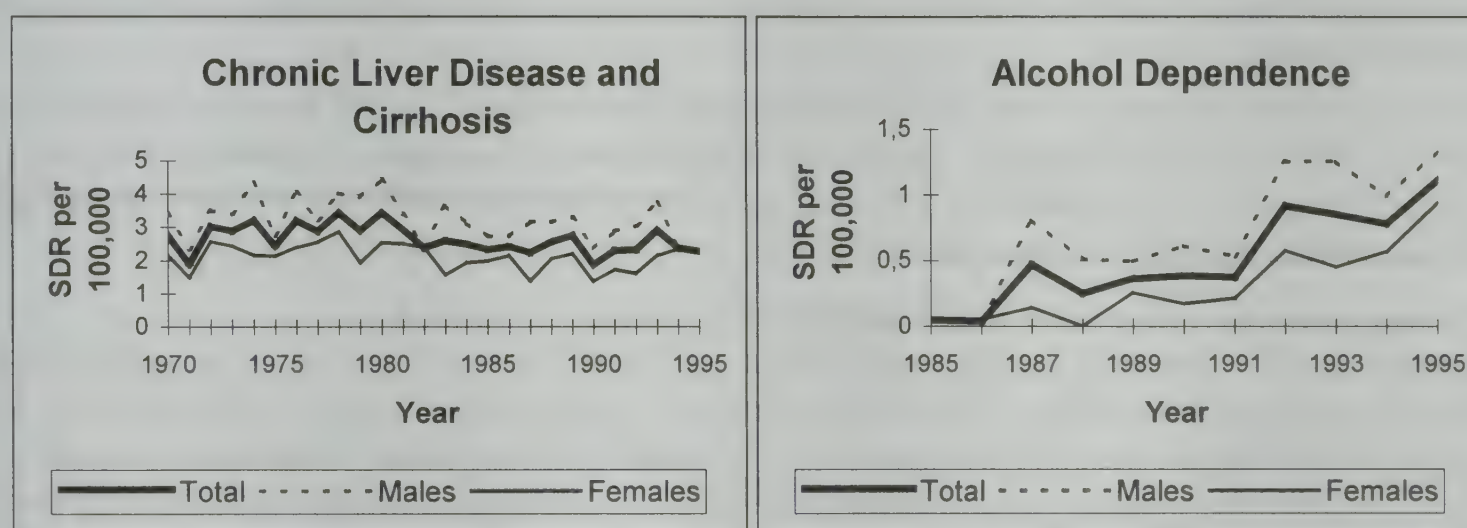
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1993 the rate of admission to inpatient treatment per 100 000 population for alcoholic psychosis was 12.9, fairly similar to the 1990 and 1992 rates, but a decrease from the rate of about 17 recorded in 1980, 1985 and 1991. However, these figures do not cover some private treatment centres. Death rates per 100 000 population from alcohol dependence have risen in recent years for both men and women.

Mortality

The SDR per 100 000 population of chronic liver disease went from 4.7 to 3.1 between 1980 and 1992.



Alcohol policies

Control of alcohol products

About half the price of beer and spirits is taxation, mostly an excise tax that is adjusted in the annual budget to keep par with inflation. The real price of all three types of alcohol, i.e. beer, spirits and wine has remained stable during the past five years. Table wine is taxed 48.1 per cent per bottle; beer (four to six per cent alcohol) is taxed 37.9 per cent per pint; spirits (over 35 per cent proof) are taxed 38.7 per cent per glass, 66 per cent per bottle of whiskey and 65 per cent per bottle of other spirits.

There are restrictions on hours and days of sale and on type and location of outlets. There is no state monopoly but a licence is required for the production and distribution of all types of alcohol (except home-made wine and beer).

Restrictions on advertising are currently implemented by means of a voluntary code operated by the alcohol and advertising industries. All media are covered by the code. General or specific health warnings are not required by law, nor are labels for alcohol content. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol. Drunkenness is prohibited in public places. The BAC limit is 0.08 g% for drivers. It is usual to suspend a person's driving licence upon conviction for a first offence of exceeding the permitted limit. Subsequent offences are

frequently dealt with in the same way but imprisonment is also an option at the discretion of the judge. Random alcohol breath testing is not carried out.

A national policy is under preparation in the late 1990s which will include historical, cultural, economic and legal factors relevant to availability and consumption of alcohol, and matters such as prevention, education, advertising, diagnosis and treatment strategies and particularly the issues of youth and alcohol and the role of parents and family. Priorities over the early 1990s have included encouraging lighter drinking; the issue of drinking and driving; alcohol and young people, and developing the role of the criminal justice system in the prevention and management of drinking problems.

There is no specific national coordinating mechanism for investigating, preventing and dealing with alcohol problems, but the Irish National Council on Alcoholism (INCA), a voluntary organization, is supported by eight health boards with the approval of the Department of Health. All undergraduate medical, psychological and social work training includes courses in mental health and alcohol dependence. Psychiatric training includes courses on alcohol problems, as does postgraduate social work training. The INCA provides courses for various groups and has been undertaking a concentrated programme in industry.

Work on the prevention of alcohol-related problems is also included in the mandate of the National Health Promotion Unit in the Ministry of Health. The Health Promotion Unit is involved in developing educational materials on the subject of alcohol for specific target audiences and for the general public. These include a national school-based programme which also addresses tobacco and other drugs, and an out-of-school programme for young people. The Health Promotion Unit is involved in training programmes and addresses a variety of educational settings where alcohol is the subject of discussion. In addition, it seeks to influence policy which will facilitate the responsible use of alcohol in society.

At the regional level, Health Education Officers within eight regional health boards provide life skills programmes which include modules on the use and misuse of alcohol. Addiction counsellors, in addition to their work in counselling services, provide advice and information to a wide range of community groups and schools via seminars, public lectures, and the like.

Alcohol data collection, research and treatment

The Medico-Social Research Board, inaugurated in 1969, has carried out some epidemiological research into alcohol consumption and alcohol problems. Some reliable basic information on alcohol consumption covering the past 200 years is available from the excise data. Regular market surveys are carried out by the major brewers and distillers, but they are not made available for scientific purposes. Hospital admission data on alcohol dependence are augmented by psychiatric case register data in some areas of the country. The National Psychiatric Reporting System reports on summary diagnostic groupings, including "Alcohol Disorders"

For a long time, treatment focused on inpatient medical services. More recently, however, efforts have been made to provide counselling and treatment at an earlier stage through general practitioners working closely with psychiatrists. Many alcohol dependents are admitted to private psychiatric hospitals, and some public mental hospitals have specialized alcohol units. Some of the health boards have alcohol counsellors to deal with the family and personal problems caused by heavy drinking. Counselling of families of alcohol dependent people is available from both statutory and non-statutory agencies who provide treatment services.

Israel

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 879 000	4 660 000	5 629 000
Adult (15+)	2 592 000	3 201 000	3 991 000
% Urban	88.6	90.3	90.6
% Rural	11.4	9.7	9.4

Health status

Life expectancy at birth, 1990-1995 : 74.6 (males), 78.4 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 15 920, PPP estimates of GNP per capita (current int'l \$), 1995: 16 490

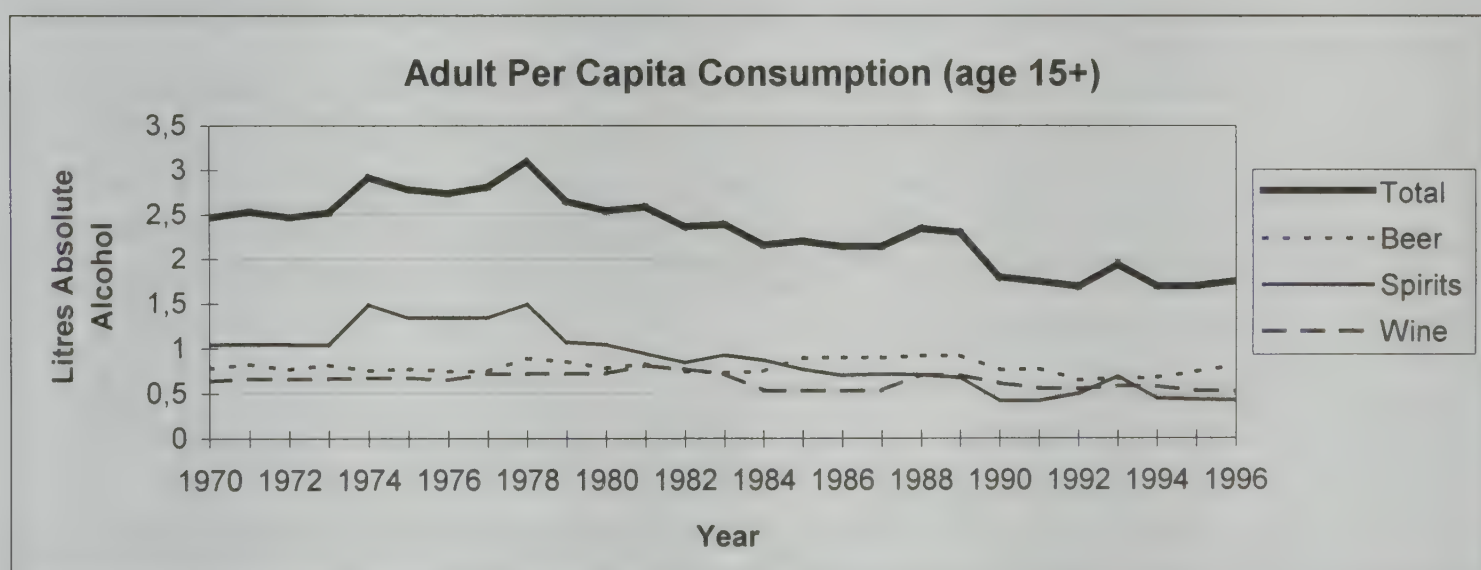
Average distribution of labour force by sector, 1990-1992 : agriculture 4%; industry 22%; services 74%

Adult literacy rate (per cent), 1995 : N/A

Alcohol production, trade and industry

Israel produces beer, distilled spirits and wine. Carlsberg AS now owns 20 per cent of Tel-Aviv-based Israel Breweries Ltd., built in cooperation with Central Bottling Co. Wente Brothers has formed a joint venture with Israel's Segal Winery to produce kosher wines.

Alcohol consumption and prevalence



Consumption

Recorded spirits consumption has fallen off since its peak in 1978. Beer consumption has remained steady over the past 25 years. There is no quantified information available on unrecorded consumption.

Prevalence

In both 1982 and 1992, surveys of a representative sample of over 1000 people aged 20 years and over showed that two per cent drank heavily. Heavy drinking was defined in this instance as drinking every day during the previous year.

Age patterns

A cohort of 1276 male and female undergraduate students was surveyed at a major university. Among the study participants, 21 per cent reported regular, weekly use of alcohol. Men were much more

inclined to drink on a weekly basis than women, and seven per cent of the students who used alcohol regularly did so on a daily basis.

Results of a WHO study of schoolchildren in 1993-1994 indicate that 68.2 per cent of boys had tried alcoholic beverages, 22.8 per cent drank alcoholic beverages at least weekly and 8.1 per cent had been drunk at least twice. Of girls, 52.6 per cent had tried alcoholic beverages, 10.4 per cent drank alcoholic beverages at least weekly and 5.6 per cent had been drunk at least twice.

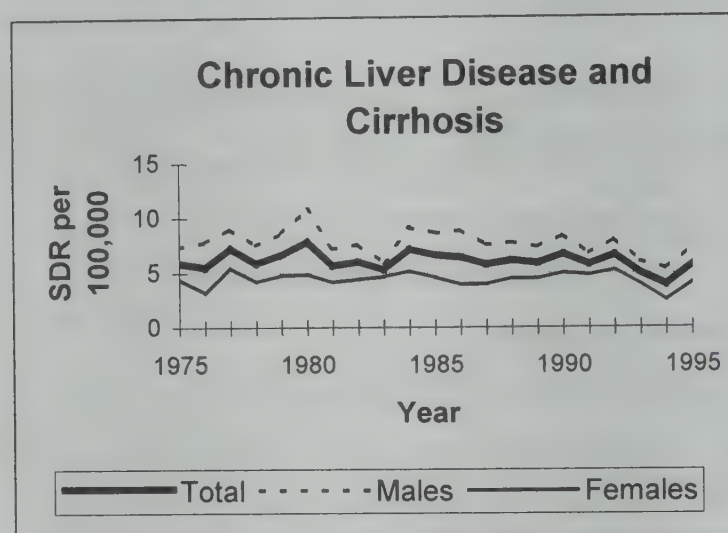
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The admission rate per 100 000 population for inpatient treatment for alcoholic psychosis remained nearly constant from 1988 to 1993, dropping slightly from 1.4 to 1.3.

Mortality

The SDR per 100 000 population of chronic liver disease fell from 11 to 8.3 between 1980 and 1992.



Alcohol policies

Control of alcohol products

The real prices of beer and wine have been decreasing, and the real price of spirits has been stable during the past five years. There are no restrictions on times or days of sale nor on type or location of outlets. There is no state monopoly and no licence is required for production or distribution of alcohol. General and specific health warnings are not required by law, and there is no maximum legal limit for the alcohol content of beverages. There are no restrictions on alcohol advertising. Labels of alcohol content are required by law.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol. The BAC limit is 0.05 g% for drivers. Random alcohol breath testing is not carried out.

Priorities of the early 1990s have been: working in the school system to encourage lighter drinking; developing the role of the social welfare system in the prevention and management of alcohol problems; developing specialized treatment for alcohol dependence and other alcohol problems and addressing particular alcohol problems such as drinking and driving. The Israel Society for the Prevention of Alcoholism (ISPA) offers interdisciplinary educational prevention programmes for schools and provides training services to teachers, parents and students. ISPA also provides training services to professionals.

Alcohol data collection, research and treatment

The Israel Society for the Prevention of Alcoholism is a research institute specializing in alcohol issues. They also distribute prevention materials such as pamphlets, posters and stickers, operate a 24 hour hot-line, offer consultation in legal and legislative matters, offer advice to parliament and police, and initiate and support research in the preventive domain. In 1994 there were one inpatient and 11 outpatient treatment centres.

Italy

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	56 434 000	57 023 000	57 187 000
Adult (15+)	43 865 000	47 496 000	48 563 000
% Urban	66.6	66.7	66.6
% Rural	33.4	33.3	33.4

Health status

Life expectancy at birth, 1990-1995 : 74.2 (males), 80.6 (females)

Infant mortality rate in 1990-1995 : 8 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 19 020, PPP estimates of GNP per capita (current int'l \$), 1995: 19 870

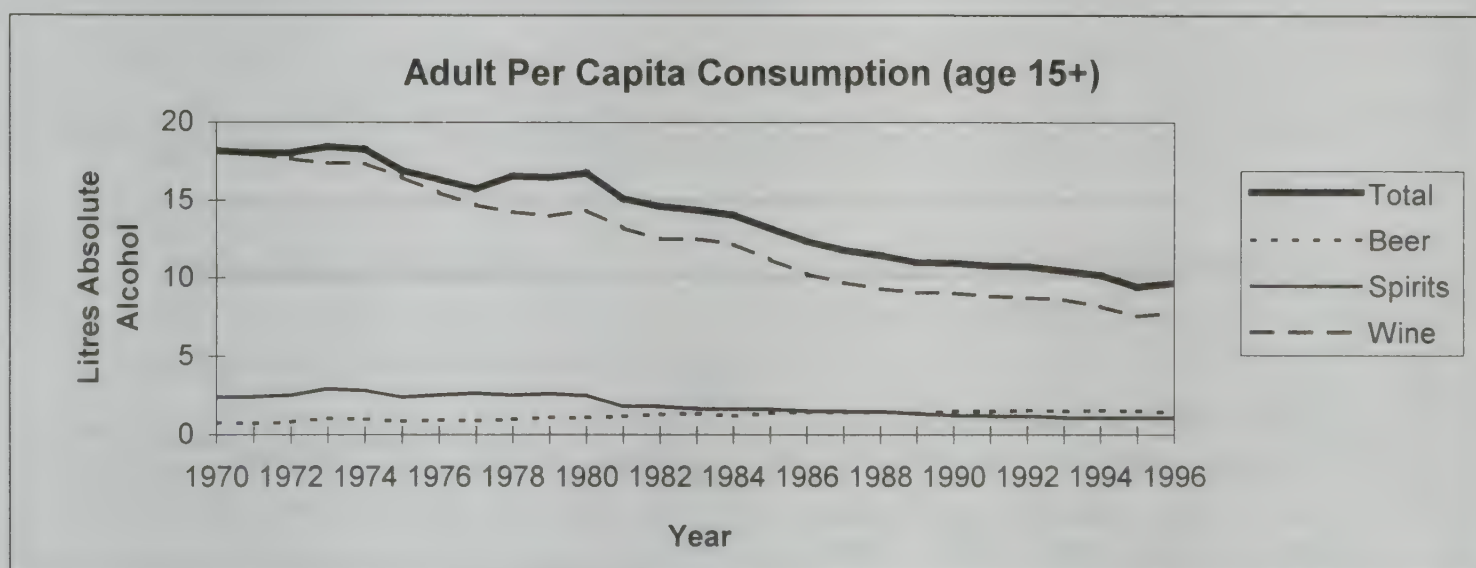
Average distribution of labour force by sector, 1990-1992 : agriculture 9%; industry 32%; services 59%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Heineken Italia's 1996 acquisition of Birra Moretti, currently Italy's third largest brewery, will make Heineken Italy's largest brewer with a market share of 38 per cent. The Italian spirits market continued its long-term contraction in 1993, with total volume down 2.9 per cent to 19.3 million cases. In 1980, annual volume stood at nearly 29 million cases.

Alcohol consumption and prevalence



Consumption

There is no quantified information available on unrecorded consumption. However, home production of wine and other alcohol plays an important role in the alcohol market. Total adult per capita consumption in Italy has fallen in the last 25 years along with the decrease in wine consumption. Spirits consumption has decreased more gradually, while consumption of beer has risen slightly.

Prevalence

A 1990 survey among adults aged 15 years and over found that 53 per cent were frequent consumers (drank alcohol at least three or four days a week), 16 per cent were moderate (weekly) consumers and 31 per cent were infrequent consumers (drank alcohol less than weekly or never). A similar survey in 1988 indicated an increase in the frequent consumption of wine and beer among Italian women between 1988 (28 per cent) and 1990 (40 per cent). However, the 1988 question specified "wine not mixed with water" while the 1990 question related just to wine.

Age patterns

A study of 1555 15 to 16 year olds (943 boys and 582 girls) was carried out in 1995. The response rate was 95 per cent (92 per cent for boys and 94 per cent for girls). Eighty-three per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 35 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 89 per cent (89 per cent for boys and 86 per cent for girls).

Data from a 1990 survey showed that at age 11 to 12 years, 34 per cent of boys and 18 per cent of girls drank alcohol weekly. At age 13 to 15 years, 39 per cent of boys and 21 per cent of girls drank alcohol weekly.

Economic impact of alcohol

Annual household expenditure devoted to alcoholic beverages, as a percentage of total expenditure, went from 1.6 to 1 between 1980 and 1994.

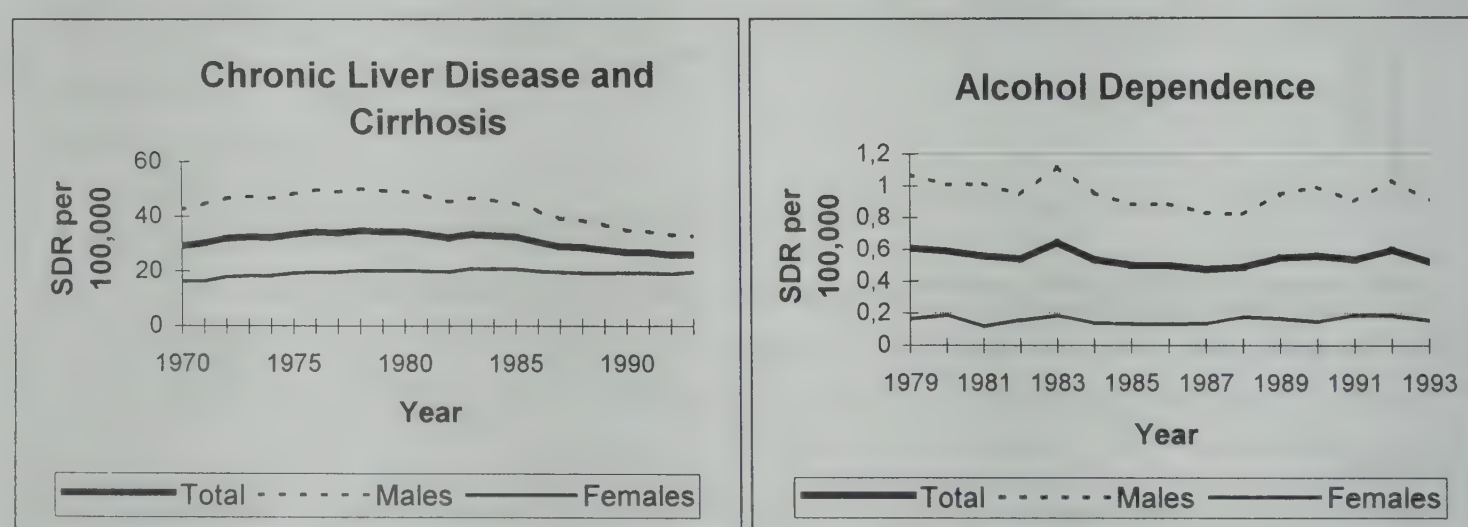
In 1994 primary direct costs concerning treatment of alcohol dependents (including: hospital care, rehabilitation, reinsertion, other health costs and disability payments) amounted to 2 609 822 million lire (US\$ 1490 million); primary indirect costs (including morbidity of alcohol dependents, including lack of work following incidents or illness, loss of work through permanent invalidity, death of alcohol dependents and loss of production) amounted to 5 613 741 million lire (US\$ 3190 million); secondary direct costs (including costs associated with incidents caused by alcohol dependents, health treatment, administrative arrangements and destruction of property) amounted to 4 009 825 million lire (US\$ 2280 million) and indirect secondary costs (including morbidity of victims of alcohol dependents loss of their production and mortality of victims plus loss of production) amounted to 868 086 million lire (US\$ 494 million), for a total 1994 loss of 13 101 474 million lire (US\$ 7460 million).

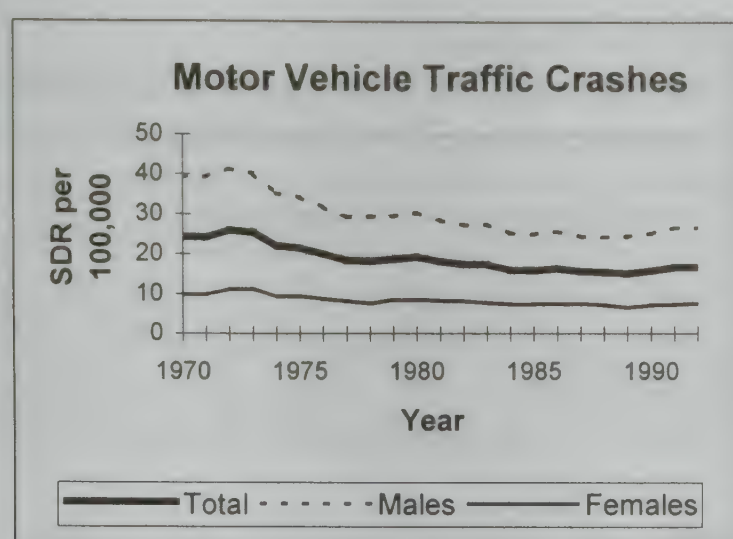
Mortality, morbidity, health and social problems from alcohol use**Alcohol dependence and related disorders**

The rate per 100 000 population of alcoholic psychosis rose from 1.7 to 2.5 between 1980 and 1990. Rates of death from alcohol dependence are low and have remained steady. However, this may reflect under-reporting.

Mortality

The SDR per 100 000 population for chronic liver disease went from 32.9 to 22 between 1980 to 1993.





Social problems

The number of alcohol-related motor vehicle crashes per 100 000 population went from 0.35 to 0.4 between 1980 and 1991.

Alcohol policies

Control of alcohol products

Table wines are not taxed. Beer (four to six per cent alcohol) is taxed 2170 lire per 100 litres and spirits (over 35 per cent proof) are taxed 1 146 600 lire (US\$ 653) per 100 litres. The real prices of beer and wine have been stable, and the real price of spirits has been increasing during the past five years.

The sale of drinks with an alcohol content of 21 per cent or more is not allowed at sporting venues, or at fairs, entertainment complexes, amusement parks (including temporary events), meeting places, during sports gatherings, music sessions or open air concerts. There are no restrictions on hours or days of sale or on location of outlets, but restrictions do exist on types of outlets. There is no state monopoly but a licence is required for the production and distribution of beer, wine and spirits. Vendors who sell alcohol to minors under 16 years of age may be arrested and may be given a higher penalty if a case of underage drunkenness is involved.

The advertising of beer, wine and spirits on television is restricted. These restrictions were imposed by the Ministry of Communications (Posts) in 1991. Labels for alcohol content are required by law. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

The sale of alcohol to those under 16 years of age is prohibited. The BAC limit is 0.08 g% for drivers. Suspension of driving licence or imprisonment is a usual penalty when a person is convicted for a first offence. Random alcohol breath testing is not carried out.

There is no agency devoted specifically to prevention of alcohol-related problems but it is included in the work of the Central Service for Alcohol and Drug Addiction (CSADA) established in 1990 to provide guidelines for all preventive activities. The actual organization of preventive activities is carried out by the Regions themselves under the supervision of the CSADA. The Ministry of Public Education promotes and coordinates health education activities and provides information on harm caused by the use of alcohol, tobacco and drugs. It also approves annual programmes proposed by the national technical and scientific committee. The implementation of activities is coordinated at the provincial level by the Education Board.

Priorities of the early 1990s have been: mass media campaigns to encourage safer drinking; developing specialized treatment for alcohol dependence and other alcohol problems and addressing particular alcohol problems. There are school-based programmes which deal with alcohol, tobacco and illicit drugs. With the collaboration of public social and health services for assisting persons dependent on alcohol and drugs, the Education Board establishes centres in second level schools for information and counselling in relation to substance use problems. The Education Board promotes training courses for teachers.

Alcohol data collection, research and treatment

The Permanent Study on Children and Alcohol in Rome and the Society on Alcoholology are research institutes which specialize in alcohol issues. The Central Service for Alcohol and Drug Addiction oversees the collection and dissemination of data from the Regions. It provides information for the Drug and Alcohol Addiction Bulletin published by the Ministry of Health.

The Ministry of Health has the competence to determine measures for the prevention, treatment and rehabilitation of pathological states arising from the abuse of alcohol. Integrated treatment of alcohol dependence, including medical, psychological and social aspects often in collaboration with self-help groups, has started in some regions with the Department for Social Solidarity being responsible for organizing such services.

An important recent development is the Health Ministerial Decree which directs that in every Local Health Unit (Health Services at the municipality level) there should be a working group for prevention, treatment and rehabilitation of alcohol dependency, with a global approach taking into consideration medical, psychological and social aspects of the problem. This has brought about an increase in the treatment of alcohol dependence in hospitals and surgeries as well as an increase in the number of personnel involved.

Kazakhstan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	14 907 000	16 670 000	17 111 000
Adult (15+)	10 077 000	11 413 000	12 016 000
% Urban	54.0	57.6	59.7
% Rural	46.0	42.4	40.3

Health status

Life expectancy at birth, 1990-1995 : 65.0 (males), 74.0 (females)
Infant mortality rate in 1990-1995 : 30 per 1000 live births

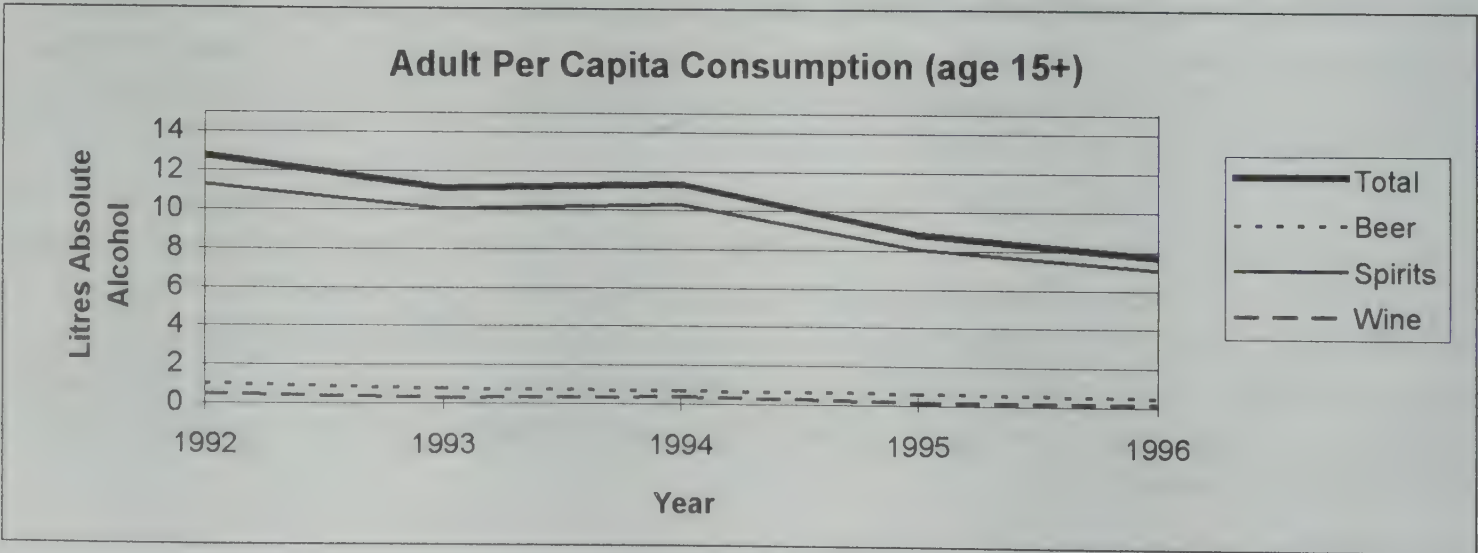
Socioeconomic situation

GNP per capita (US\$), 1995: 2717, PPP estimates of GNP per capita (current int'l \$), 1995: 3010
Average distribution of labour force by sector, 1990-1992 : agriculture 20%; industry 22%; services 58%

Alcohol production, trade and industry

Kazakhstan produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption has been falling since 1992, driven mainly by the drop in consumption of distilled spirits. There are no data available on consumption of home or informally-produced alcoholic beverages.

Prevalence

A survey in the South Kazakhstan region of 217 women aged 30 to 60 years, most of them living in towns and many of them employees of state enterprises or public organizations, showed that 73 per cent had used alcohol at some time. Statistics show that the proportion of women involved in drunkenness is increasing, with the male-female ratio fluctuating from 1:10 in 1990 to 1:8 in 1993.

Economic impact of alcohol

Consumer expenditure on alcoholic beverages, as a percentage of general expenditure on purchase of goods and payments for services, fell from 5 in 1990 to 2.5 in 1995.

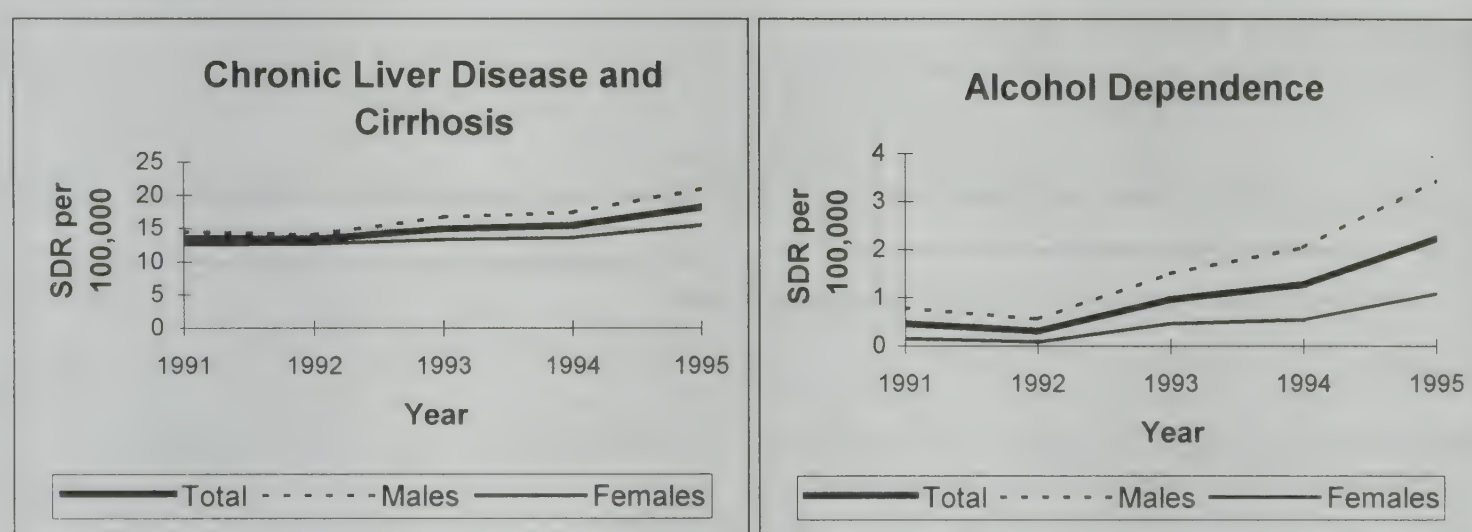
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate per 100 000 population of treatment admissions for alcohol dependence decreased from 87.9 to 54.9 between 1988 and 1991. The number per 100 000 population of patients with alcohol dependence registered at hospitals and other clinics during the year decreased from 16.8 in 1990 to 12.9 in 1995. However, death rates per 100 000 population from alcohol dependence have been rising rapidly in recent years.

Mortality

The SDR per 100 000 population (all ages) for chronic liver disease was 24.9 in 1994, compared to 20.8 in 1995.



Social problems

The number of persons committing crimes under the influence of alcohol (thousands) increased from 22.7 in 1990 to 25.2 in 1995.

Alcohol policies

Control of alcohol products

In 1993 Parliament imposed a 50 per cent tax on vodka. The government announced restrictions on trade of alcohol products with alcohol-by-volume of over 12 per cent, which became effective 1 December, 1997. The ban applies to movable trade outlets such as kiosks and stalls, and also to markets and street cafes. Alcoholic beverages are now only available in licensed shops, cafes, bars and restaurants.

Control of alcohol problems

The Ministry of Health's Department of Psychiatry and Narcology is responsible for formulating, applying, coordinating and monitoring national policies. A national policy and programme on alcohol, drugs and other psychoactive substances has been drawn up covering the area of prevention,

legislation and treatment/rehabilitation. There have been some mass media campaigns in relation to alcohol, particularly in 1992.

Alcohol data collection, research and treatment

The Department of Psychiatry and Neurology in the Ministry of Health is responsible for collating, analyzing, and disseminating data, and using it as a basis for national policies.

Involuntary treatment was abolished at the beginning of 1990. From 1988 to 1993, two of three narcological hospitals and 19 of 26 polyclinics were closed and beds were reduced by half. The number of narcological beds in special medical institutions for rehabilitation and work therapy in both enterprises and agriculture was reduced from 4370 to 965. In the same period, 419 physicians, more than half of all the narcologists in Kazakhstan in 1988, left their narcological establishments because of a reduction in workplaces and changes in their occupation. These reductions are reflected in a decline in the rates of persons registered with the narcological services with a diagnosis of alcohol dependence.

The State Addiction Service has a regional centre in Chimkent in the South Kazakhstan Region which provides services to people with drug or alcohol dependence. In all the districts and towns of the region there are units where persons with drug or alcohol problems may receive qualified medical help from a psychiatrist and a nurse. There are both inpatient and outpatient services. There were 18 alcohol and other drug treatment units located at factories and construction sites in Chimkent. People with alcohol or other drug dependence could be diagnosed, observed and if necessary, treated at these units. However, most of these treatment units were closed in the 1990-1993 period as employers were terminating employment of people who were dependent on drugs or alcohol.

Kyrgyzstan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 617 000	4 362 000	4 745 000
Adult (15+)	2 277 000	2 724 000	2 982 000
% Urban	38.3	38.2	38.9
% Rural	61.7	61.8	61.1

Health status

Life expectancy at birth, 1990-1995 : 65.0 (males), 72.8 (females)

Infant mortality rate in 1990-1995 : 35 per 1000 live births

Socioeconomic situation

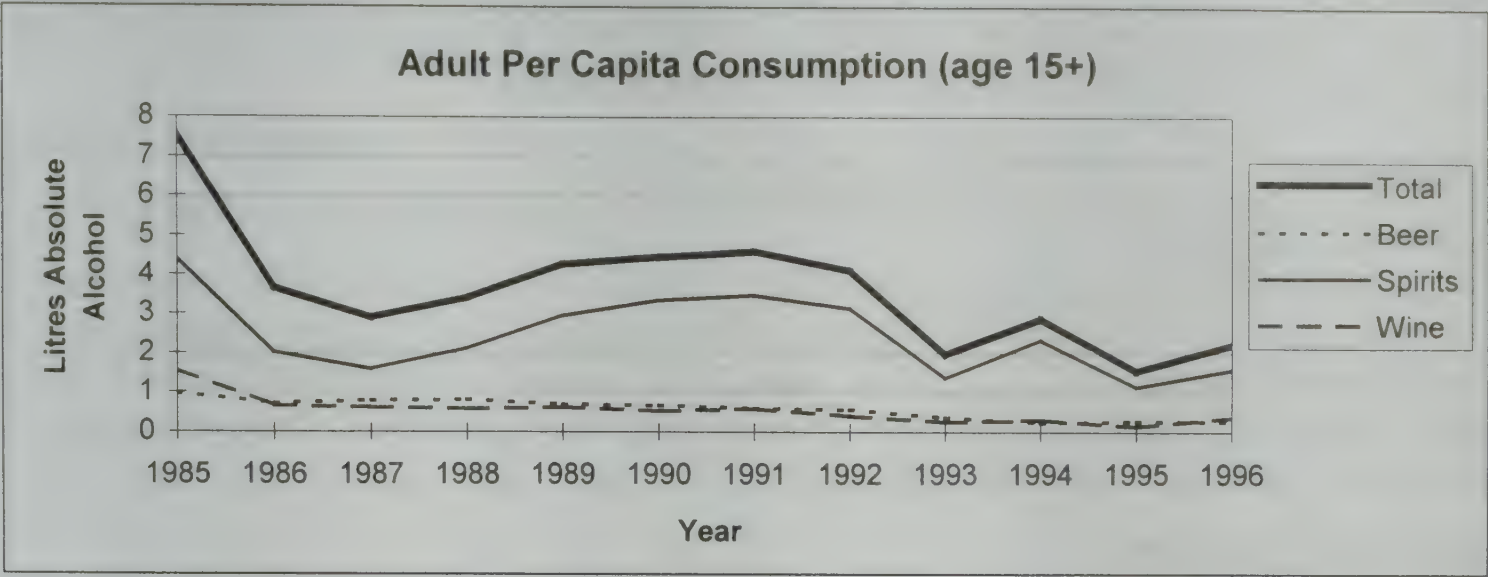
GNP per capita (US\$), 1995: 700, PPP estimates of GNP per capita (current int'l \$), 1995: 1800

Average distribution of labour force by sector, 1990-1992 : agriculture 16%; industry 24%; services 60%

Alcohol production, trade and industry

Kyrgyzstan produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

In recorded consumption, adults consumed just over 2 litres of pure alcohol in 1994, down from a high of 7.5 litres in 1985. However, there are no quantified data available regarded unrecorded consumption, and experts consider that the actual trend in consumption has been upwards during the mid-1990s rather than downwards.

Age patterns

While no studies of prevalence of use among adults are available, research shows that alcohol is used by 14 per cent of school children, 30 per cent of students at vocational training colleges and 32 per cent of students at technical colleges.

Economic impact of alcohol

Consumer expenditure on alcoholic drinks as a percentage of general expenditure on purchase of goods and payments for services decreased from 3.9 to 1.9 between 1990 and 1995.

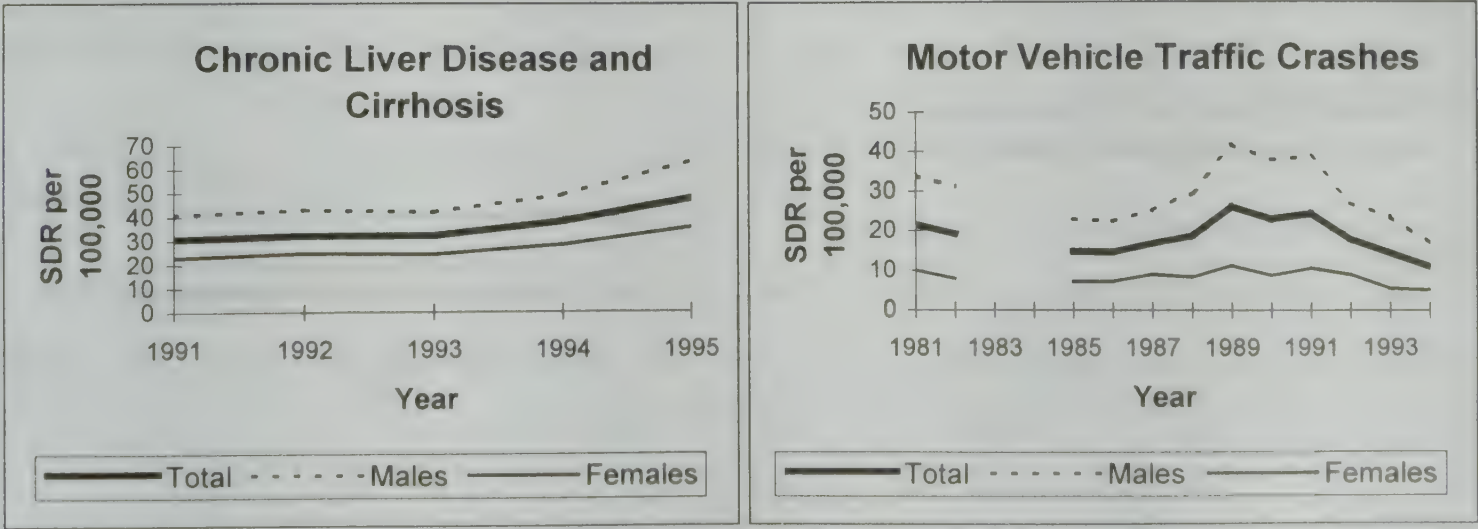
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1993, more than 28 000 people were officially registered as suffering from chronic alcohol dependence. Each year between 3000 and 4000 people including 100 adolescents are registered as occasional users of alcohol in a problematic way. Women account for between 10 and 12 per cent of those recorded as suffering from chronic alcohol dependence. Authorities estimate the true figures to be much higher.

Mortality

The SDR per 100 000 population for chronic liver disease was 30.5 in 1991 and 32.1 in 1995.



Social problems

The number of motor vehicle crashes involving alcohol per 100 000 population increased from 9 in 1986 to 16.8 in 1989, then dropped to 7 in 1993. The number of persons committing crimes under the influence of alcohol (thousands) rose from 3.7 in 1990 to 4.1 in 1995.

Alcohol policies

Control of alcohol products

Although alcohol has become expensive during the 1990s, its real price has fallen relative to the big increases in food prices. The situation varies for different types of alcohol. For example, Kyrgystan's own alcohol is not expensive. There are no restrictions on days of sale or on location of outlets. Previously, there were restrictions on hours of sale and on type of outlets but these are not so strongly enforced now as many small businesses have started.

Control of alcohol problems

In the early 1990s, priorities have been: developing specialized treatment; addressing problems such as drinking and driving, and drinking among young people; and increasing the role of primary health care in the prevention and early detection of alcohol problems. In early 1994 the government decided on a major alcohol control programme.

It is not permitted to drink alcoholic beverages in cars or transport generally, in public parks, workplaces, discos or in clubs (except in special alcohol clubs). The minimum legal age limit is 16 years for buying alcohol, although young people now buy alcohol in the many newly-opened small shops.

The BAC limit is 0.0 g% for drivers. A first offence in this area frequently incurs a suspension of driving licence for one or two years. Police have the power to take those suspected of driving above the permitted BAC to a doctor for confirmatory tests.

General and specific health warnings are not required by law. The narcological dispensaries carry out some educational work. Some mass media programmes dealing with alcohol only and others dealing with alcohol, tobacco and other drugs have been used but this aspect is not yet well developed. An education programme dealing jointly with alcohol, tobacco and other drugs is being developed in the Medical Institute in Bishkek.

Alcohol data collection, research and treatment

There is no special institute for research on alcohol but some such research is carried out in the Faculty of Psychiatry in the Medical Institute in Bishkek. The role of private treatment is being developed and efforts are being made to develop the role of the social welfare system in the prevention and management of alcohol problems. In 1980 most alcohol dependent persons were treated in psychiatric hospitals. In the mid-1980s, with the establishment of narcological dispensaries, many alcohol dependents worked by day and stayed in the dispensary at night. At the end of the 1980s, a greater emphasis was placed on outpatient treatment and this trend is increasing.

The Medical Institute deals with adolescent behavioural problems relating to substance use. Narcological dispensaries located in Bishkek, in every regional centre and in some small towns provide substance abuse treatment. The Centre for Postgraduate Training provides psychotherapeutic and client psychological training.

Latvia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 534 000	2 671 000	2 557 000
Adult (15+)	2 016 000	2 096 000	2 031 000
% Urban	68.3	71.2	72.8
% Rural	31.8	28.8	27.1

Health status

Life expectancy at birth, 1990-1995 : 63.3 (males), 74.9 (females)

Infant mortality rate in 1990-1995 : 14 per 1000 live births

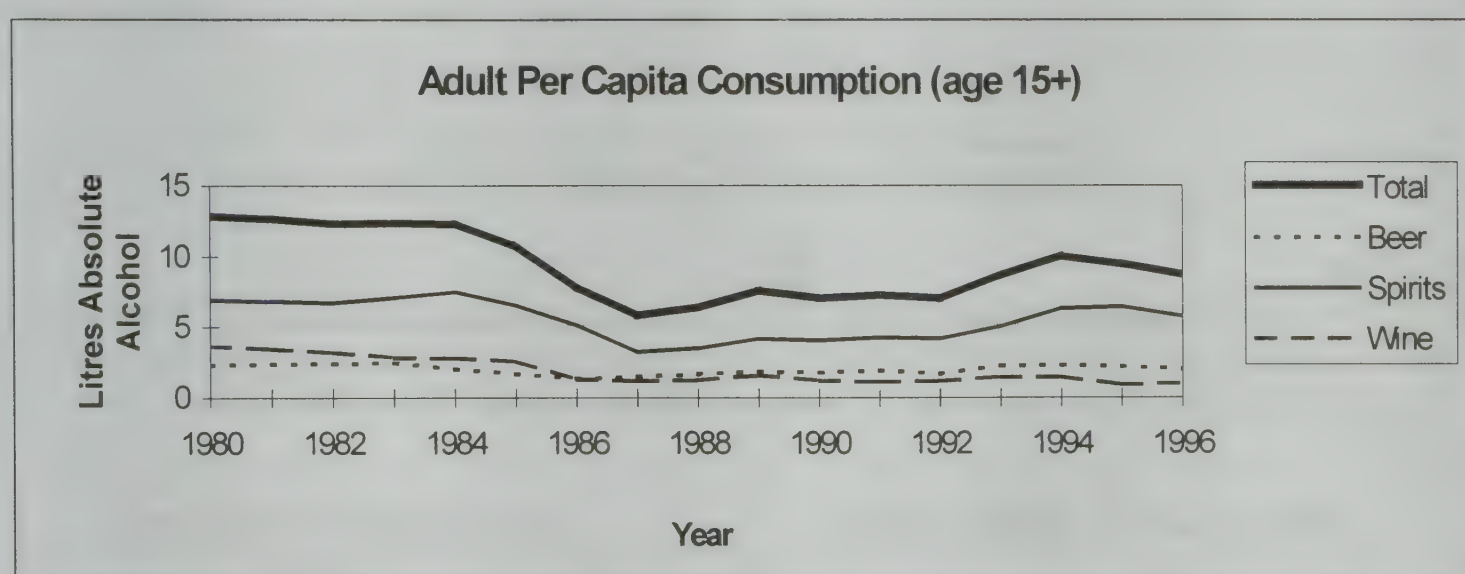
Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 9%; industry 33%; services 58%

Alcohol production, trade and industry

Latvia produces, imports and exports beer, distilled spirits and wine. Aldaris Brewery, owned by a joint venture between the largest brewers in Norway, Finland and Sweden, sells 54 per cent of the country's beer.

Alcohol consumption and prevalence



Consumption

Recorded per capita consumption has fallen off considerably since the early 1980s, according to estimates by the European Regional Office of WHO. Spirits account for more than half of total alcohol consumption. Unrecorded consumption is estimated to be very high, bringing total consumption up to a range of between 16 and 20 litres per capita in 1993.

Prevalence

A survey published in 1993 found that 85 per cent of men and 53.8 per cent of women drank alcoholic beverages. About 2.5 per cent of men and 0.7 per cent of women drank several times a week.

Age patterns

A study of 2179 15 to 16 year olds was conducted in 1995. Eighty-seven per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 43 per cent had drunk to intoxication in the last 12 months.

A 1993/1994 study among 15 year old boys and girls showed that 93.2 per cent of boys and 93.1 per cent of girls had tried alcoholic beverages. Approximately 16 per cent of boys and 3.2 per cent of girls drank alcohol at least weekly.

Economic impact of alcohol

On average, two per cent of annual household expenditures were spent on alcoholic beverages in 1994.

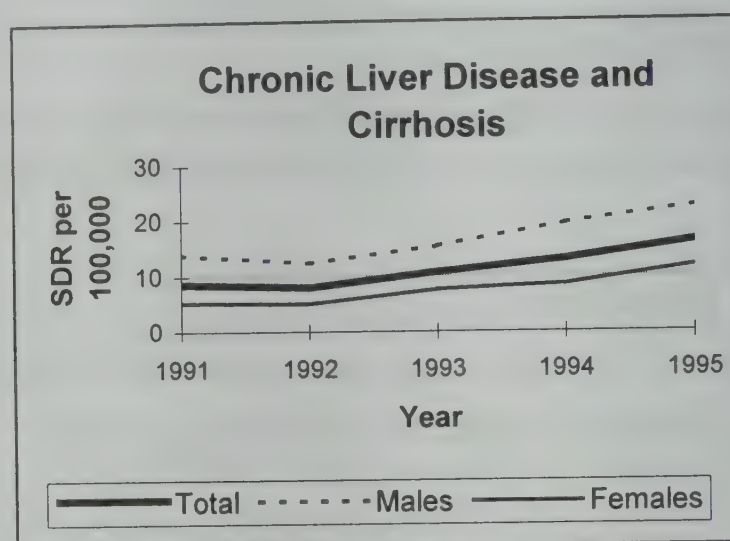
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate per 100 000 population of hospital admissions for alcoholic psychosis fell from 46 in 1980 to 10 in 1987, then rose to 17 in 1990 and to 66 in 1993.

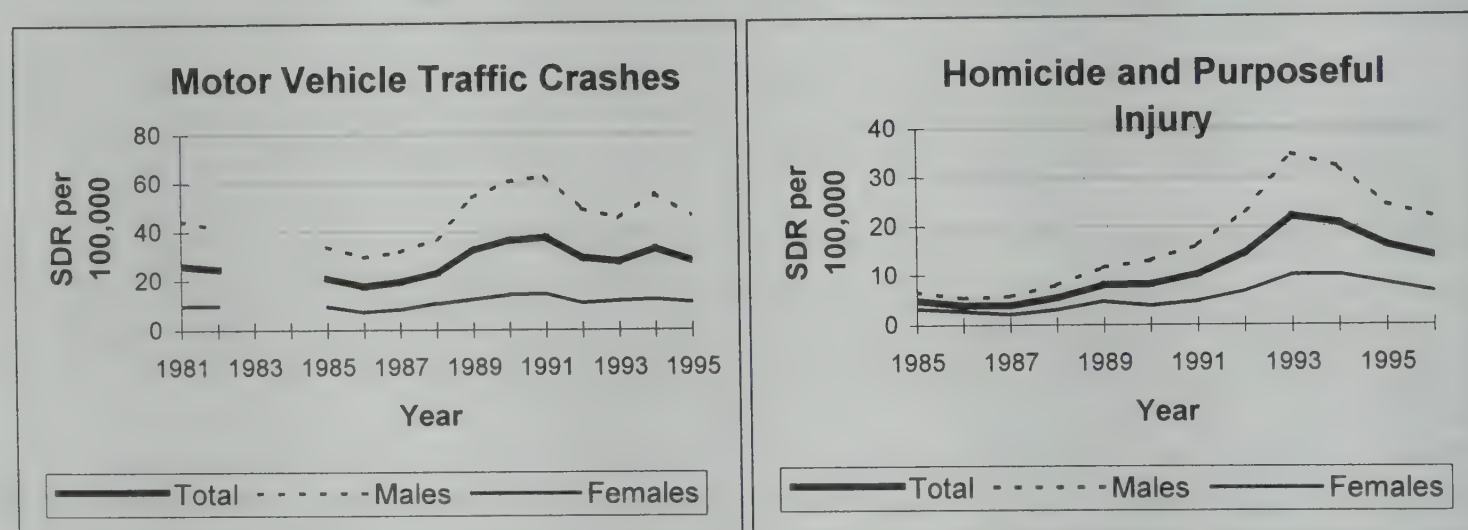
Mortality

The SDR from chronic liver disease and cirrhosis per 100 000 population for men rose from 13.9 in 1991 (5.2 for women) to 22.5 in 1995 (11.7 for women).



Social problems

In 1988, 25 per cent of motor vehicle traffic crashes were alcohol-related. In 1990 the figure rose slightly to 27 per cent and then fell to approximately 20 per cent in 1992 and 1993. In 1984, 53 per cent of all crime offenders were under the influence of alcohol at the time of the crime.



Alcohol policies

Control of alcohol products

The trend in the real price for all three types of alcohol has been decreasing during the early 1990s. Table wines are taxed 30 to 40 per cent, beer (four to six per cent alcohol) is taxed 20 per cent, and spirits (over 35 per cent proof) are taxed 70 to 80 per cent.

There is a state production monopoly and a licence is required for the production and distribution of wine and spirits. There are no restrictions on hours or days of sale, or on types or location of outlets. There are no restrictions on the advertising of beer, wine and spirits in the media except in the city of Riga. Neither general or specific health warnings nor labels for alcohol content are required by law, and there is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

The Decree of the Board of the Supreme Soviet of the Latvian Soviet Socialist Republic on Provisions Regarding Strengthening of Controls on Alcohol Abuse and Illicit Production of Alcoholic Beverages of 1985 is still in force. There is a minimum legal age limit of 18 years for buying alcohol but it is not effectively enforced. There are mass media, school-based and workplace programmes which deal

with substance use in general. The BAC limit is 0.05 g% for drivers and is fairly effectively enforced. On conviction for a second offence of driving above the permitted BAC, suspension of driving licence or imprisonment is usual. Random alcohol breath testing is carried out, but infrequently.

Alcohol data collection, research and treatment

The Latvia State Drug Abuse Prevention and Health Care Centre is the national agency dealing with prevention of alcohol problems. A Unit within the Ministry of Welfare finances and organizes treatment for alcohol and drug dependent persons, collects data, deals with training for professionals and is also involved in the prevention of alcohol-related problems. There are several regional agencies dealing with alcohol-related issues, but their work is mainly in the area of therapy and rehabilitation. On 14 June, 1990 the Board of Health Protection Ministers adopted and issued Decision No. 7 on Strengthening the Medical and Social Support for Alcohol, Drug and Toxic Substances Dependent Patients, calling for monitoring of inpatient and outpatient care, rehabilitation and social care, and registration procedures for substance dependent persons.

Lithuania

Socio-demographic characteristics

POPULATION	1980	1990	1995
Total	3 433 000	3 711 000	3 700 000
Adult (15+)	2 624 000	2 871 000	2 892 000
% Urban	61.2	68.8	72.1
% Rural	38.8	31.2	27.9

Health Status

Life expectancy at birth, 1990-1995 : 64.9 (males), 76.0 (females)
Infant mortality rate in 1990-1995 : 13 per 1000 live births

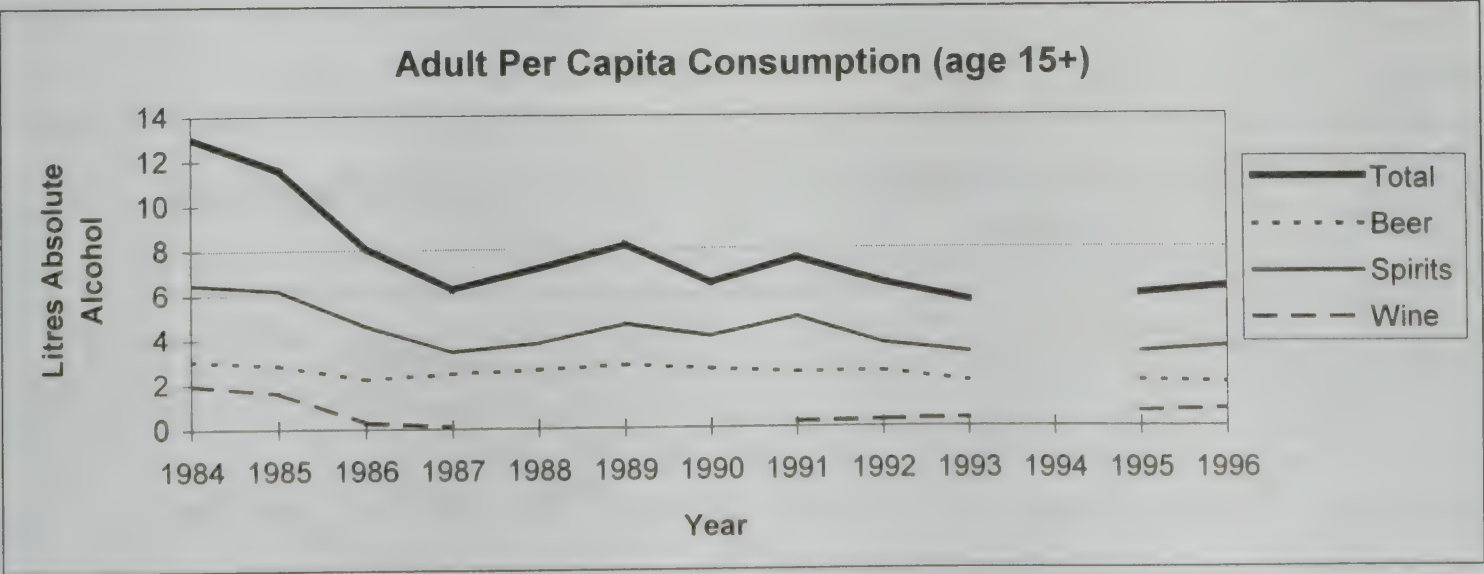
Socio-Economic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 10%; industry 33%; services 57%

Alcohol production, trade and industry

Kalnapolis Brewery, owned by a joint venture between the largest Norwegian, Swedish and Finnish brewers, has 15 per cent of the beer market.

Alcohol consumption and prevalence



Consumption

Figures used to calculate consumption are not reliable. It was estimated that in 1994, 20 per cent of the alcoholic beverage market consisted of alcohol legally produced in Lithuania, 10 to 15 per cent was legally imported and 60 to 65 per cent was illegally imported or illegally produced. This suggests a figure of about 12 litres for total per capita consumption of pure alcohol. According to alcohol industry sources, nearly all of the spirits consumed in Lithuania are vodkas.

Prevalence

A survey of workers between the ages of 18 and 70, conducted between 1983 and 1987, found that 10.6 per cent (23.3 per cent males, 2.4 per cent females) were regular drinkers. There is no more recent prevalence data available for adults.

Age patterns

A study of 3196 15 to 16 year olds (1502 boys and 1694 girls) was conducted in 1995. The response rate was 89 per cent (88 per cent for boys and 90 per cent for girls). Eighty-seven per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 57 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 95 per cent (94 per cent for boys and 95 per cent for girls).

A 1993/1994 study among boys and girls aged 15 years showed that 95.3 per cent of boys and 95.1 per cent of girls have tried alcoholic beverages, while 13.8 per cent of boys and 5.7 per cent of girls drink alcohol at least weekly. In a 1984 higher school survey of two cities, 11 per cent of males and 6.4 per cent of females drank twice or more weekly, while a 1985 school survey of 15 to 16 year olds showed that 80 per cent had ever used alcohol, 20 per cent had drunk alcohol in the previous month and 3.3 per cent had drunk in the previous week.

Economic impact of alcohol

Two per cent of household expenditures on average were spent on alcoholic beverages in 1993, down from 6.1 per cent in 1990.

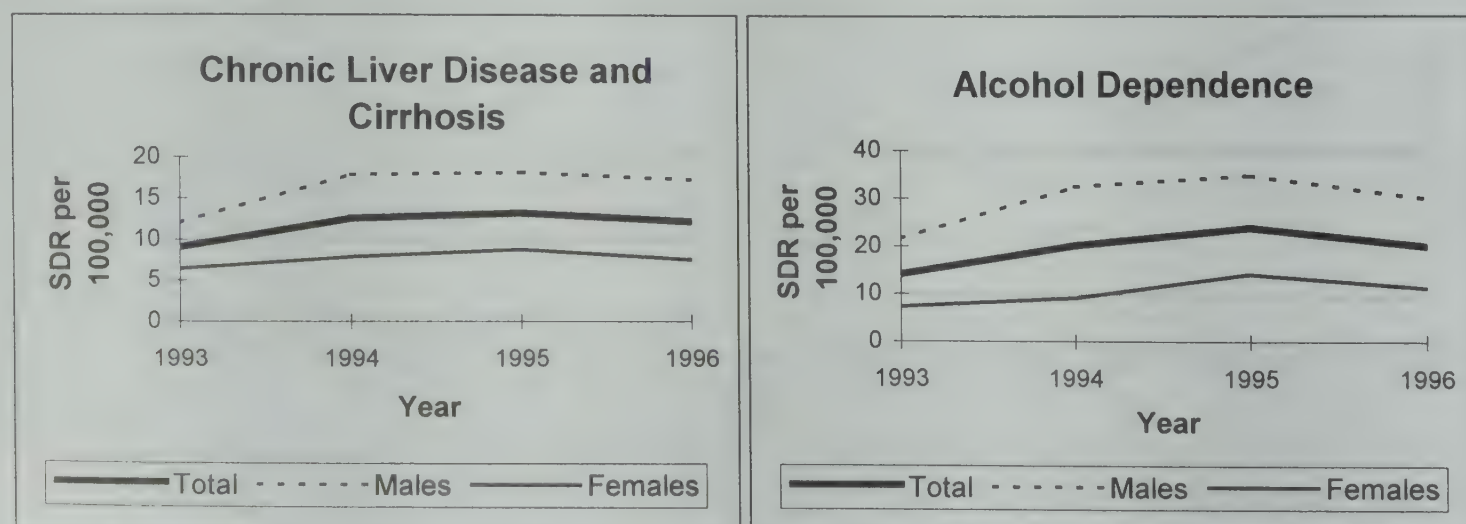
Mortality, morbidity, health and social problems from alcohol use

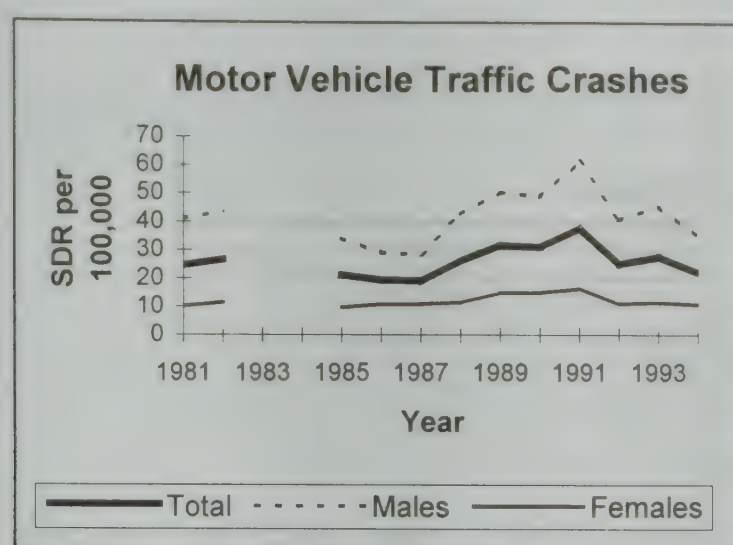
Alcohol dependence and related disorders

The rate per 100 000 population of hospital admissions for alcohol psychosis fell from 25.8 in 1980 to 3.5 in 1987, and then climbed steadily back up to 20.5 in 1993. The rate of inpatient admissions due to alcoholic psychosis increased from 6.9 to 33 per 100 000 population between 1990 and 1995. The rate per 100 000 population of hospital admissions for alcohol dependence decreased from 97 in 1989 to 48 in 1993.

Mortality

The SDR per 100 000 population for alcohol dependence is the highest reported in the world. The SDR for acute alcohol deaths fell from 15.8 in 1980 to 6.8 in 1990, and then rose to 13 in 1993. The SDR for chronic liver disease and cirrhosis showed a gradual rise during the first half of the 1990s, going from 14.3 to 20.4 between 1991 and 1995 for men, and from 5.6 to 8.5 for women during the same period.





Morbidity

In 1985 13.3 per cent of motor vehicle traffic crashes were alcohol-related. This figure dropped to 11.6 per cent in 1991, rose slightly to 12.6 per cent in 1993, and remained constant in 1994 at 12.7 per cent.

Alcohol policies

Control of alcohol products

The trend in real price of all three types of alcoholic beverages has been increasing during the early 1990s. Beer (four to six per cent alcohol) is taxed 28 per cent, and spirits (over 35 per cent proof) are taxed 76 per cent.

The sale of alcohol is forbidden near churches, schools, kindergartens and youth hostels. Industrial enterprises and health care institutions are alcohol-free. Sale of alcoholic beverages is permitted from 11:00 to 22:00 hours. For sale at other hours and on Sundays, a special licence is required. There is no state monopoly for the distribution of alcoholic beverages or for the production of beer, but a licence is required. There is a state monopoly for production of wine and spirits.

The advertising of beer is not restricted, but advertising spirits and wine in the media is banned and the ban is quite effectively enforced. General or specific health warnings are not required by law and there is no maximum legal limit for the alcohol content of beverages. Labels for alcohol content are not required by law.

Control of alcohol problems

There is a minimum legal age limit of 18 for buying alcohol but it is not effectively enforced. BAC limit is 0.04 g% for drivers and is quite effectively enforced. Convictions of driving above the BAC limit usually result in licence suspension or a fine of US\$ 500. Random alcohol breath testing is frequently carried out. A new lower BAC limit of 0.02 %g is under consideration. In 1994 educational programmes on healthy lifestyles including alcohol, tobacco and drug issues were adopted in second level schools. According to the new Alcohol Control Law, the Ministry of Education and Science is responsible for developing educational programmes on alcohol for secondary schools and other educational institutions. Youth sobriety movements are also involved in the promotion of healthy lifestyles.

There is no agency devoted specifically to prevention of alcohol-related problems but it is included in the work of the National Health Promotion Agency. The Vilnius Narcology Centre provides annual reports on alcohol problems, disseminates information to the mass media, contributes to legislation, prepares publications such as brochures and manuals for primary health care workers and cooperates with nongovernmental organizations and self-help groups at the national and local level.

Alcohol data collection, research and treatment

The Lithuanian Health Information Centre was created in 1991, and collects medical-statistical information from all medical institutions of Lithuania (demography, mortality, morbidity, hospital activities and medical personnel). The Centre introduces health information systems in medical institutions and analyzes health status in Lithuania. Annual reports are prepared on health situation, mortality and medical personnel.

There is no information available on treatment facilities.

Luxembourg

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	364 000	381 000	406 000
Adult (15+)	295 000	315 000	338 000
% Urban	78.9	86.3	89.1
% Rural	21.1	13.7	10.9

Health status

Life expectancy at birth, 1990-1995 : 72.0 (males), 79.3 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

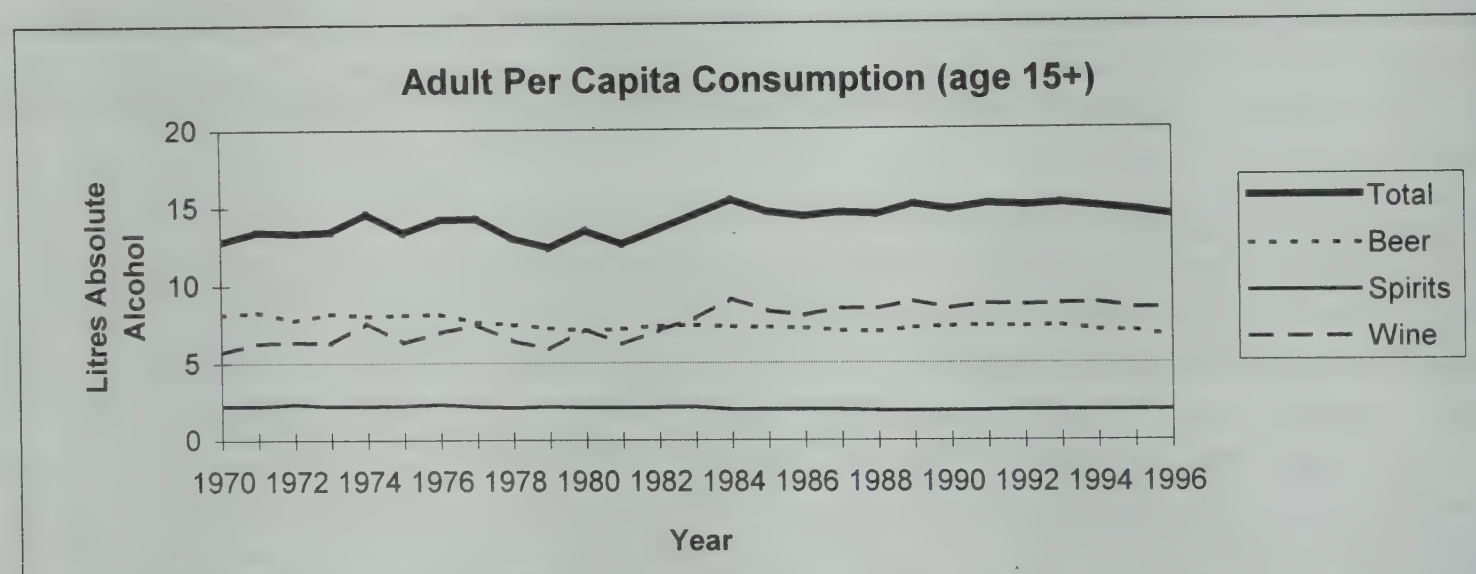
GNP per capita (US\$), 1995: 41 210, PPP estimates of GNP per capita (current int'l \$), 1995: 37 930.
Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 31%; services 66%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Luxembourg produces beer, distilled spirits and wine. It is also a major trans-shipment point for alcoholic beverages in Southern Europe.

Alcohol consumption and prevalence



Consumption

According to data from Luxembourg's own Central Statistical and Economic Studies Office, adult per capita consumption has remained fairly steady since 1970, rising in the early 1980s, mainly as a result of increased wine consumption.

Prevalence

A study conducted in 1990 found that among persons aged 15 years and over, 20 per cent drank alcohol at least three to four days per week (frequent consumers), 31 per cent were moderate consumers (drinking at least weekly) and 45 per cent drank less than weekly or never (infrequent consumers). A 1980 survey of 1227 adults indicated that 28 per cent consumed alcoholic beverages daily, 52 per cent consumed alcoholic beverages several times a week and 1.6 per cent never consumed alcoholic beverages.

Age patterns

A 1990 survey found that 5 per cent of 11 to 12 year old boys and 16 per cent of 13 to 15 year old boys drank alcohol weekly. None of the 11 to 12 year old girls and four per cent of 13 to 15 year old girls drank alcohol weekly.

Economic impact of alcohol

In 1985, Luxembourg families spent an average of 1.4 per cent of their budget on alcoholic beverages. Taxes on alcoholic beverages, domestic and imported, amounted to luxF 1884 million (US\$ 51.3 million) in 1985, or about 2.5 per cent of the total budget.

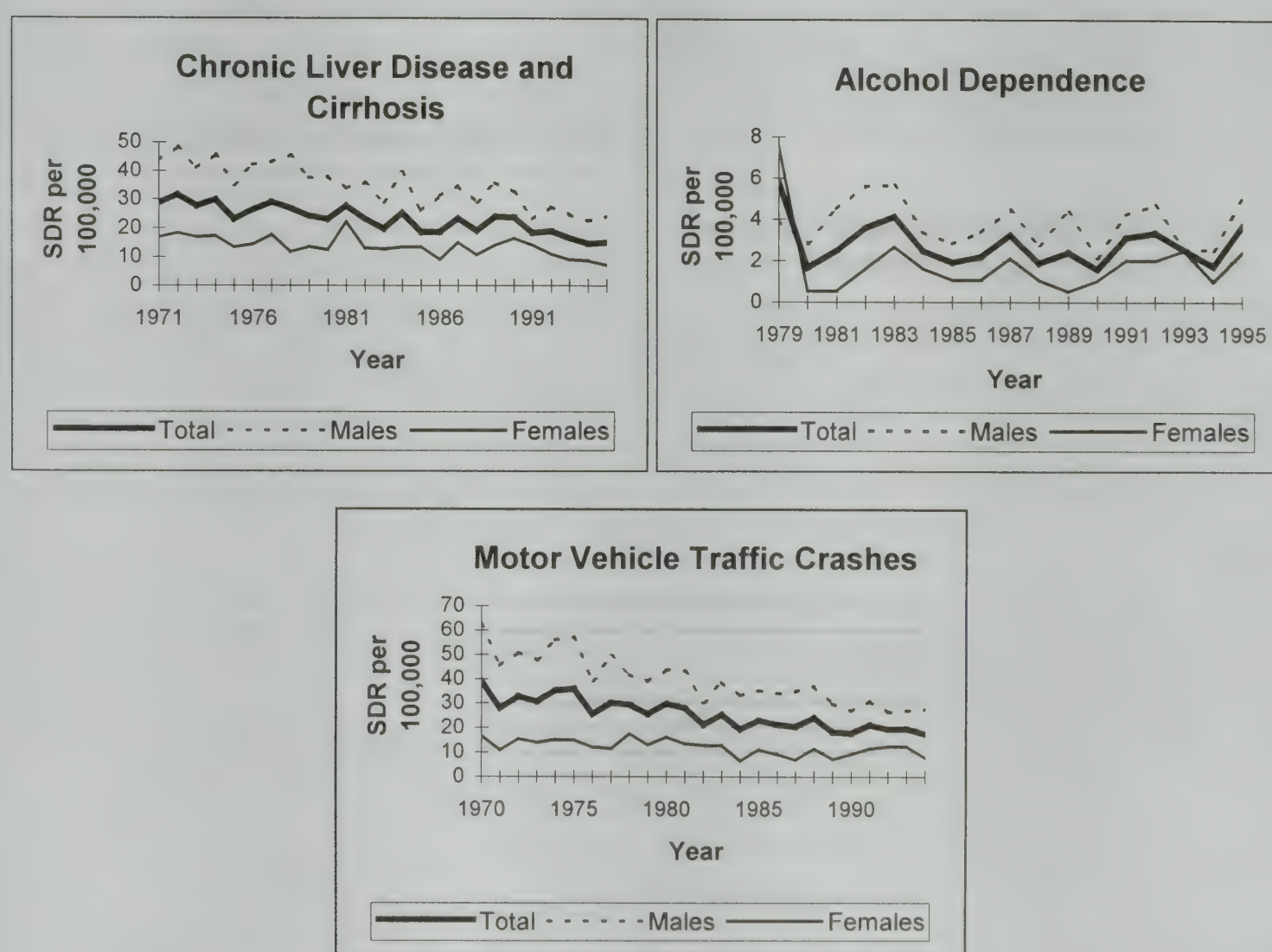
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The SDR from alcohol dependence syndrome has fluctuated since the 1980s between two and four per 100 000 population, with the 1995 rate placing Luxembourg just behind France in international rankings. In 1988, alcohol-related admissions to psychiatric hospitals constituted 45.3 per cent of total admissions, down from 49.2 in 1981.

Mortality

The SDR per 100 000 population for chronic liver disease decreased from 28.7 to 15 between 1971 and 1995.



Social problems

The number of alcohol-related motor vehicle crashes per 100 000 population fell from 57.9 to 45.9 between 1985 and 1993. In 1985, the Diekirch Courts found that of 65 sentences passed, 31 per cent were for alcohol abuse or drunkenness. In 1980 the Ministry of Transport estimated that alcohol abuse played a part in about 80 per cent of withdrawals of driving licences and judicial prohibitions of driving.

Alcohol policies

Control of alcohol products

There are restrictions on hours of sale, but there are no restrictions on days of sale or on type or location of outlets. There are only very few controls on the production and trade of alcoholic beverages. General but not specific health warnings are required by law, as are labels for alcohol content. There are no restrictions on the advertising of alcohol, and there is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcohol. The BAC limit is 0.08 g% for drivers. On conviction for a second or subsequent offence of driving above the limit, suspension of driving licence is usual. Random alcohol breath testing is carried out, but infrequently.

In 1980 the National Council against Alcoholism (CNLA) organized public information and provided short courses to army recruits three times a year. That same year, the Ministry of Health launched a major campaign, including educational courses in secondary schools, courses for teachers in primary schools and distribution to all families of health education materials on alcohol problems.

Priorities of the early 1990s have been: mass media campaigns to encourage safer drinking; encouraging lighter drinking in work settings; increasing the role of primary health care teams in the prevention and early detection of alcohol problems; developing the role of the social welfare system in the prevention and management of alcohol problems; developing specialized treatment for alcohol dependence and other alcohol problems; and addressing particular alcohol problems. CNLA provides an information service, and collaborates with Alcoholics Anonymous and SOS Distress. The section Prevention of Drug Dependencies in the Ministry of Justice is the national agency responsible for prevention of alcohol-related problems. There are national school-based programmes on substance use in general.

Alcohol data collection, research and treatment

Since 1978, there has been a specialized centre in Useldange where a number of scientific methods have been tried out. The system used is based on community therapy where the patient is expected to take a large part of the responsibility for the outcome of the treatment. Major multi-national enterprises generally have employee assistance programmes offering treatment options to their employees.

Malta

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	324 000	354 000	366 000
Adult (15+)	248 000	272 000	284 000
% Urban	83.1	87.6	89.3
% Rural	16.9	12.4	10.7

Health status

Life expectancy at birth, 1990-1995 : 73.8 (males), 78.3 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1991: 7300 , PPP estimates of GNP per capita (current int'l \$), 1991: 7575 .

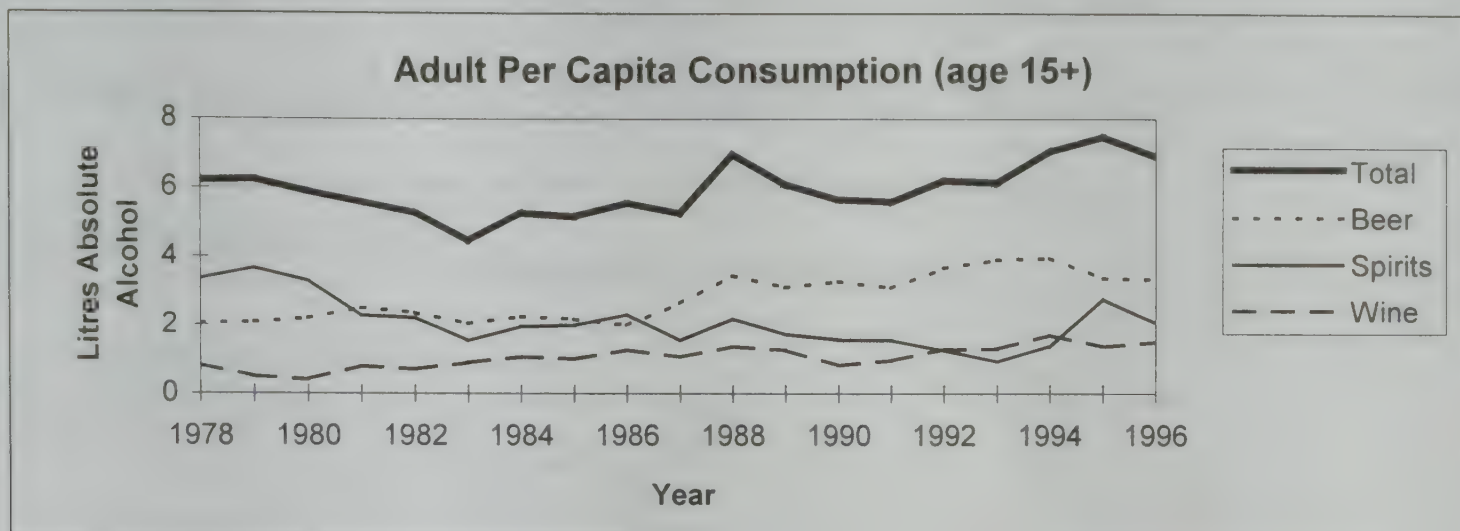
Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 28%; services 69%

Adult literacy rate (per cent), 1995 : N/A

Alcohol production, trade and industry

Malta produces beer and wine, and imports distilled spirits.

Alcohol consumption and prevalence



Consumption

Beer has superseded distilled spirits as the alcoholic beverage of choice in recorded production. There are no data available on unrecorded consumption.

Prevalence

A 1992 survey of 1000 people over 15 years old found that 39 per cent drink alcoholic beverages. Alcohol consumption was higher in males than in females, and excessive drinking (defined as five or more bottles of beer, four or more glasses of wine, or four or more units of distilled spirits during one day) was low (between one and four per cent of those surveyed). The higher the level of education, the lower the consumption of wine, and the higher the consumption of beer and spirits.

Age patterns

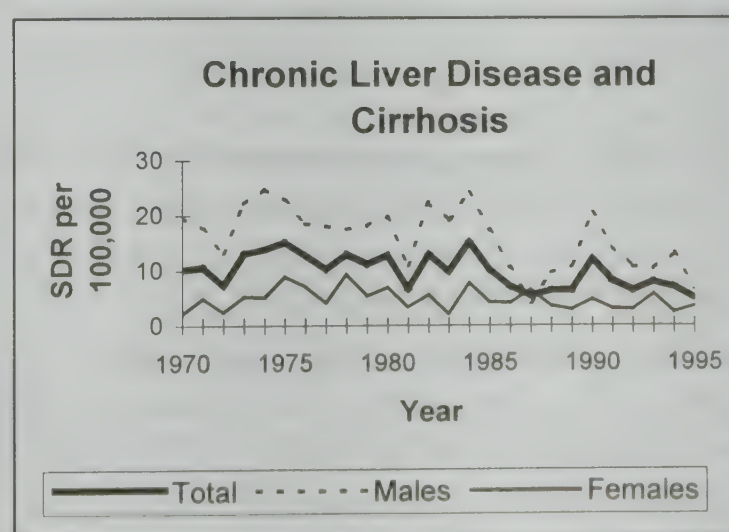
The same 1992 survey found that 43 per cent of people between the ages of 15 and 19 drank alcoholic beverages, compared with 54 per cent of those between 20 and 24.

A study of 2832 15 to 16 year olds (1269 boys and 1563 girls) was conducted in 1995. The response rate was 53 per cent (47 per cent for boys and 60 per cent for girls). Eighty-nine per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 35 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 92 per cent for both boys and girls.

Mortality, morbidity, health and social problems from alcohol use

Mortality

The SDR per 100 000 population for chronic liver disease dropped from 12.9 to 7.9 between 1980 and 1993.

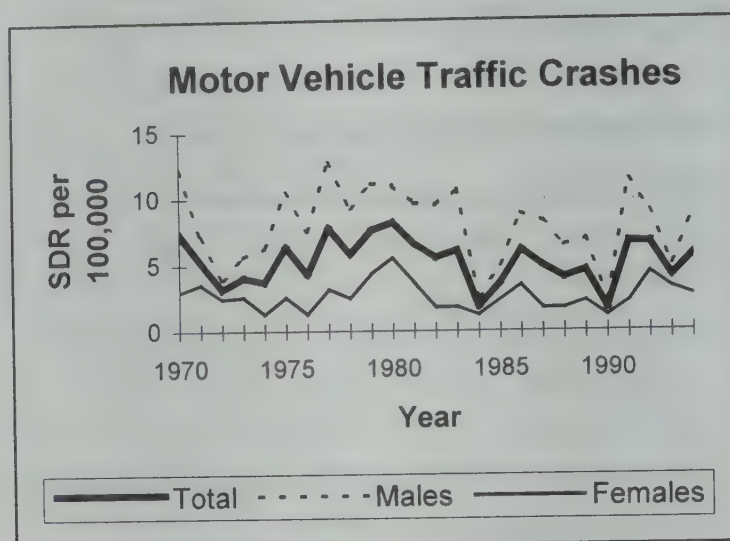


Health problems

The number of alcohol-related hospital admissions fluctuated from 173 in 1992, to 180 in 1993, and to 175 in 1994. Psychiatric hospital admissions for alcohol dependence increased by 50 per cent between 1980 and 1993, and for males by 79 per cent. Male hospital admissions for alcohol dependence were 26 per cent of total male hospital admissions and 18 per cent of total psychiatric hospital admissions.

Social Problems

The number of alcohol-related motor vehicle crashes per 100 000 population rose from 1.2 to 1.8 between 1983 and 1994.

**Alcohol policies****Control of alcohol products**

The trend in the real price of all three types of alcoholic beverage, i.e. beer, spirits and wine has been stable during the early 1990s. The percentage of the price of alcoholic beverages which is tax is approximately as follows: table wines 20 to 25 per cent; whiskies 40 to 45 per cent; beer (local) 15 per cent; beer (imported) 20 to 25 per cent.

There are restrictions on hours of sale and on types of outlets. There are no restrictions on days of sale or location of outlets. A licence is required for the distribution and production of all three types of alcoholic beverage except for home produced wine, which is quite popular in Malta.

General and specific health warnings are not required by law. There are no restrictions on the advertising of beer, wine and spirits. The maximum legal limit for the alcohol content of wine is 24 per cent, 40 per cent for whiskey, brandy, rum and gin, and 20 per cent for other alcoholic drinks, except wine and beer. Labels for alcohol content are required by law.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcohol. There is no specific legislation on the maximum blood alcohol content permitted while driving. If a person has a severe traffic crash and is admitted to the hospital, BAC will be tested there and the result may be used as evidence for insurance purposes. The legal offence is most likely to be one of careless driving.

The Agency Against Drug and Alcohol Abuse (SEDQA) coordinates the efforts of other relevant agencies and collaborates with them in the preparation and execution of programmes. Priorities of the early 1990s have been mass media campaigns to encourage safer drinking; encouraging lighter drinking in work settings especially in schools; developing specialized treatment for alcohol dependence and other alcohol problems; addressing particular alcohol problems such as drinking and driving; and assisting relevant nongovernmental organizations.

Priority is given to prevention through demand reduction. SEDQA's aim is to promote attitudes that contribute to a healthy lifestyle and therefore reduce the demand for alcohol and other drugs. OASI is an autonomous philanthropic organization established in 1991 that works on a national level to increase awareness of the health hazards of substance abuse and to provide alternative treatment and rehabilitation facilities for persons dependent on alcohol and drugs. The issue of substance use in general is included in a life skills programme for 14 and 15 year olds.

Alcohol data collection, research and treatment

Collection of alcohol-related data falls within the brief of SEDQA. Gozo has two main centres that deal with individuals who have a drug and alcohol problem: the Drug Detoxification Centre in the Gozo General Hospital, and the OASI Out-Patient Programme. KADA (Commission Against Drug and Alcohol Abuse) is a policy-formulating body that brings together more than forty experts and operators from voluntary organizations, government departments, professions and related organizations to discuss policy issues, make recommendations and also oversee the quality of services.

Netherlands (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	14 144 000	14 952 000	15 503 000
Adult (15+)	10 987 000	12 226 000	12 650 000
% Urban	88.4	88.7	89.0
% Rural	11.6	11.3	11.0

Health status

Life expectancy at birth, 1990-1995 : 74.4 (males), 80.4 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 24 000, PPP estimates of GNP per capita (current int'l \$), 1995: 19 950

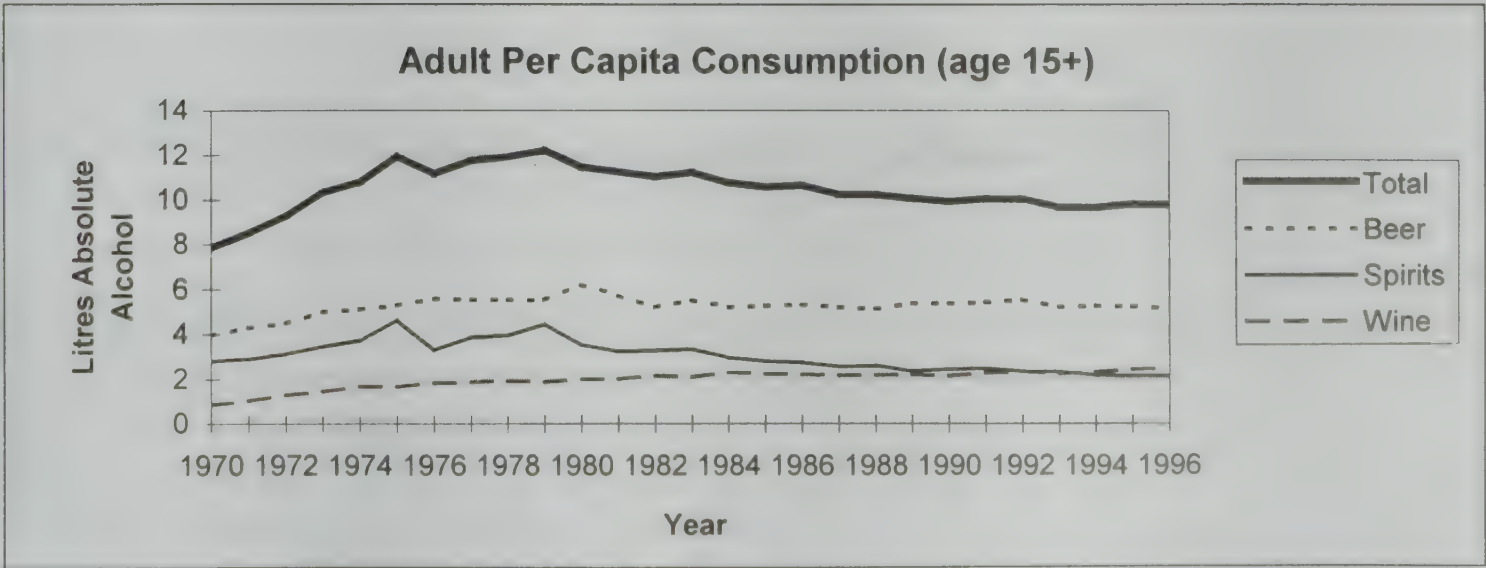
Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 25%; services 70%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

The Netherlands is predominantly a beer-drinking country. The country is home to Heineken NV, the number two brewer in the world, and the leading beer exporter. About two-thirds of Dutch spirits volume comes from such localized products as genever, vieux, advocaat and fruit-flavoured specialty drinks. While these traditional tastes are gradually ceding ground to more international-style spirits, the Dutch spirit market as a whole is shrinking.

Alcohol consumption and prevalence



Consumption

There is no quantified information on unrecorded consumption but it is not considered to be significant. There is almost no illegal production of alcohol. However, in recent years because of fiscal harmonization in the European Union there appears to be a growing importation of wine and spirits by Dutch tourists returning home. No accurate data on this phenomenon are yet available.

Prevalence

A 1990 survey among a sample aged 15 years and over, found that 20 per cent were frequent consumers (drank alcohol at least three to four days per week), 34 per cent were moderate consumers (drinking at least weekly) and 46 per cent drank infrequently (less than weekly or never). A survey carried out in 1986 indicated that 15 per cent of the total sample drank daily (26 per cent of those over 35 years old). Almost half the sample aged 15 years and older had 6 or fewer standard glasses of alcohol during the week before the interview, while 27 per cent had greater than 10 glasses.

Age patterns

In a 1992 survey of more than 10 000 school pupils aged 10 years and over, 64 per cent had drunk alcohol by the age of 12, down from 69 per cent in 1988. In 1992, 28 per cent had consumed at least five glasses of alcohol on their last drinking occasion, up from 12 per cent in 1984. In all age groups boys drank a much larger amount of alcohol than girls. Data from a 1990 survey showed that 11 per cent of boys aged 13 to 15 drank alcohol weekly, compared with 7 per cent of girls in the same age group.

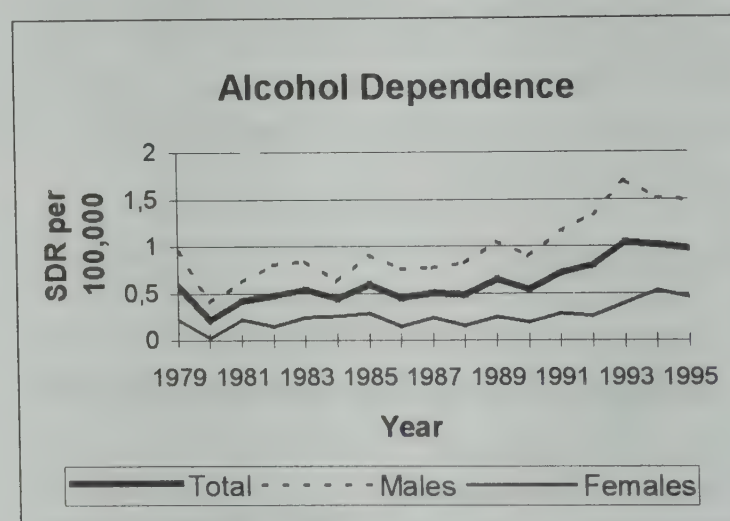
Economic impact of alcohol

Consumer expenditure on alcoholic beverages in 1989 was almost 600 guilders per capita (US\$ 295.70), and 880 guilders (US\$ 433.70) per average drinker, equalling more than 3.5 per cent of total consumer expenditure. In 1982, 1600 people were employed in distilling, an additional 4000 in the wholesale trade and 4500 in liquor stores. In 1989, around 8500 people were employed in brewing.

Mortality, morbidity, health and social problems from alcohol use

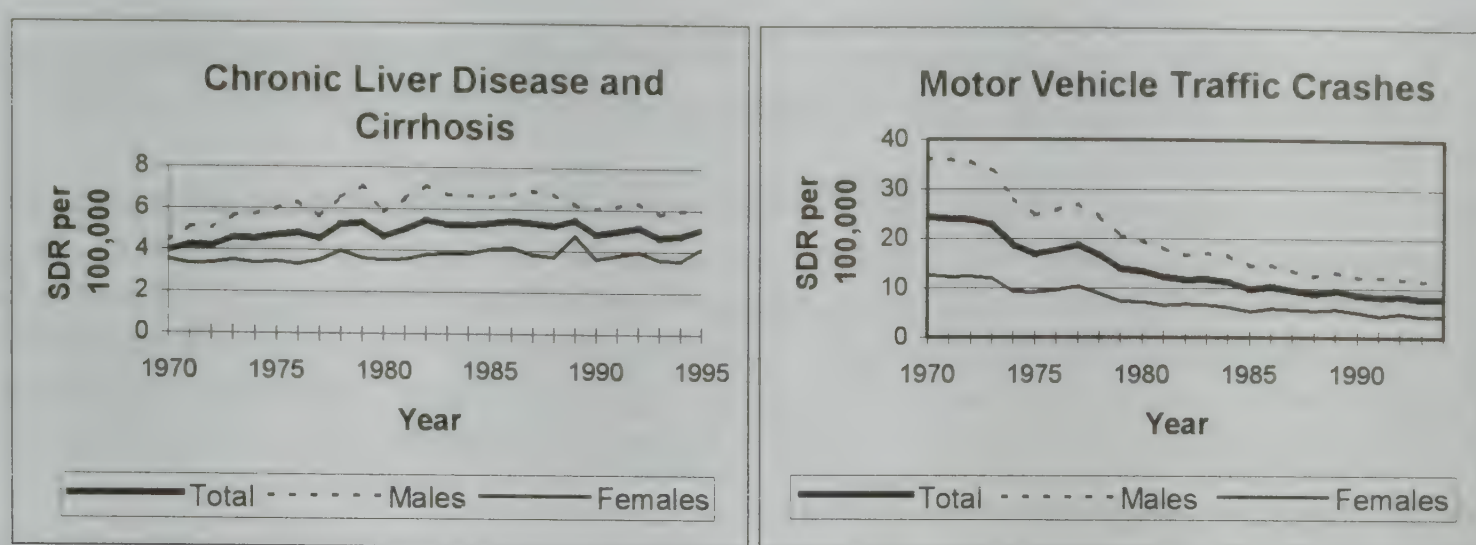
Alcohol dependence and related disorders

Admission rates per 100 000 population to general hospitals for alcoholic psychosis went from 4.5 to 3.6 between 1980 and 1990, then dropped to 2.8 in 1992. However, the SDR per 100 000 population from alcohol dependence has been rising in recent years.



Mortality

Between 1980 and 1992 the SDR per 100 000 population of chronic liver disease remained constant at 5.1.



Social problems

The number of road traffic crashes involving alcohol per 100 000 population was 16.2 in 1992 compared to 25.6 in 1985. Alcohol consumption was observed in 8.4 per cent of fatal crashes in 1992, compared to 14.7 per cent in 1980.

Alcohol policies

Control of alcohol products

Between 1960 and 1980, alcoholic beverages on the average became 36 per cent cheaper. The real price of spirits has been increasing, but the real price of beer and wine has been decreasing over the past five years. Table wines are taxed 16 per cent, beer (4 to 6 per cent alcohol) is taxed 34 per cent, spirits (over 35 per cent proof) is taxed 69 per cent and sherry is taxed 41 per cent.

Drinking is banned in workplaces (except for special occasions), in transport and in the parks of some municipalities. There are restrictions on hours and days of sale and on types of outlets, and liquor shops and supermarkets are closed on Sundays and during evening hours. Opening hours of bars/discos are restricted locally by the mayor, and no liquor is sold in supermarkets. There is no state monopoly for production or distribution of alcoholic beverages but a licence is required for distribution for on-premises consumption of all alcoholic beverages. No licence is required for off-premises consumption of beer and wine. Licence conditions are judged beforehand by local police/municipalities. A licence is required not for the production *per se*, but because of excise duties.

Restrictions on advertising of alcoholic beverages are currently implemented by means of a voluntary code operated by the alcohol and advertising industries. All media are covered by the code, which specifies that alcohol may have no relation with sports, traffic, youth, psycho-active effects, work, health or encouragement to excess consumption. Labels with general or specific health warnings are not required by law. Labels for alcohol content have been required since January 1993 in conformity with the regulations for harmonization of the internal market in the European Union. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying beer and wine and an age limit of 18 years for buying spirits. The BAC limit is 0.05 g% for drivers. On conviction for a second and subsequent offences of driving above the permitted BAC, suspension of driving licence is usual and imprisonment is also an option depending on the circumstances. Random alcohol breath testing is frequently carried out.

Because of the sharp rise in alcohol consumption between 1960 and 1980, the Government decided to develop and implement an alcohol control policy aimed at preventing the risks of alcohol use. A memorandum was drawn up by the Interministerial Steering Committee for Alcohol and Drug Policies. In 1987, the memorandum was debated in Parliament, which supported most of the proposals. The Bureau Alcohol Education Plan is involved in mass media campaigns, prevention projects, public relations and information for consumers. Priorities of the early 1990s have been: reducing availability; mass media campaigns to encourage safer drinking; encouraging lighter drinking in work settings; increasing the role of primary health care teams in the prevention and early detection of alcohol problems; using price policy to reduce demand; developing the role of the criminal justice

system in the prevention and management of alcohol problems, especially drunken driving; developing specialized treatment for alcohol dependence and other alcohol problems; and addressing particular alcohol problems.

There are a variety of alcohol education programmes in the mass media, schools and workplace and some school-based programmes which address the issue of substance use in general. Regional agencies such as addiction clinics and outpatient counselling centres for alcohol and drugs also have a prevention and education role at the local level. Several professional courses have been established. Short courses have also been organized for the police, prison personnel, welfare departments of the army, social workers, medical students, local welfare institutions, teachers, etc.

Alcohol data collection, research and treatment

The Netherlands Institute for Alcohol and Drugs is involved in the documentation and monitoring of research, as well as providing information on alcohol issues. The Central Bureau of Statistics produces alcohol consumption statistics.

Much of the treatment of people with an alcohol dependence is carried out through community facilities. There are also extensive social welfare and subsidized facilities that can be used to deal with alcohol problems. Apart from the psychiatric hospitals and specialized addiction clinics, there are many consultation bureaux (80 branches) that deal with alcohol clients (from nearly 11 000 in 1970 to more than 18 000 in 1987).

Norway

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 086 000	4 241 000	4 337 000
Adult (15+)	3 181 000	3 437 000	3 492 000
% Urban	70.6	72.3	73.2
% Rural	29.5	27.7	26.8

Health status

Life expectancy at birth, 1990-1995 : 73.6 (males), 80.3 (females)

Infant mortality rate in 1990-1995 : 8 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 31 250, PPP estimates of GNP per capita (current int'l \$), 1995: 21 940

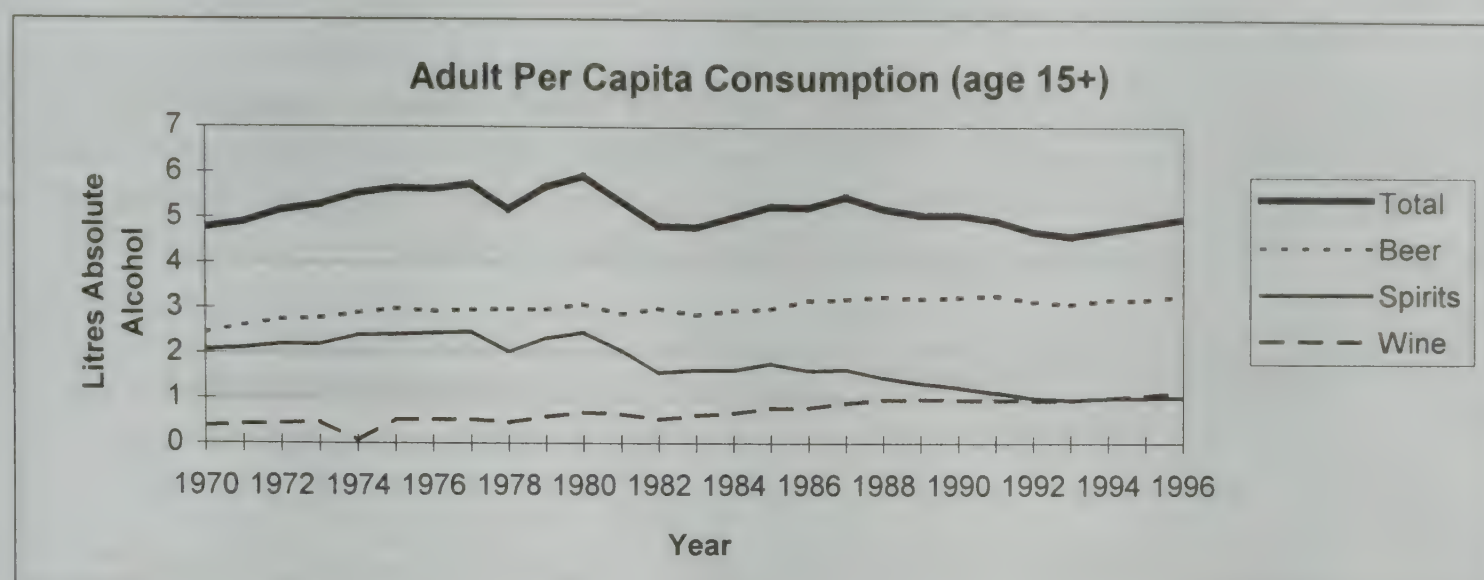
Average distribution of labour force by sector, 1990-1992 : agriculture 6%; industry 24%; services 70%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Norway's beer industry is dominated by the foods conglomerate Orkla which controls Ringnes, the country's largest brewer. As a result of negotiations with the European Economic Area (EEA), the state alcohol retailing monopoly is being retained, as is the state monopoly for the production of spirits, but the retail and the production divisions of the monopoly will be separated into two companies. Alcohol wholesaling, import and export are being opened up to competition.

Alcohol consumption and prevalence



Consumption

Three interview surveys were carried out in 1985, 1991 and 1994 on representative samples of about 2000 persons aged 15 years and over. In 1994, 9 per cent of all interviewees had bought home distilled alcohol in the past year, and 17 per cent had bought or smuggled spirits into the country illicitly. Thirty-four per cent of men and 87 per cent of women had drunk home distilled alcohol over the past year. In 1994 it was estimated that unrecorded consumption added up to at least one-third of total recorded consumption. This would suggest that total consumption of alcohol was 7.05 litres of absolute alcohol per adult in 1994.

Prevalence

In the 1994 interview survey described above, 86 per cent of men and 76 per cent of women drank beer over the past year, 81 per cent of men and 82 per cent of women drank wine and 84 per cent of both men and women drank spirits. The average quantity of beer consumed per occasion was 4.2 cl of pure alcohol, the average quantity of wine consumed per occasion was 3.9 cl of pure alcohol and the average quantity of spirits consumed per occasion was 5.8 cl of pure alcohol. The annual average pure alcohol consumption for all interviewees was 0.31 cl of beer, 1.64 cl of wine and 1.07 cl of beer.

According to Eurodata figures from 1990, one per cent of the population aged 18 years and over drank daily or almost daily, 23 per cent drank once or twice a week, 23 per cent drank twice a month and 38 per cent drank once a month or less.

Age patterns

A study of 3910 15 to 16 year olds (1979 boys and 1931 girls) was conducted in 1995. The response rate was 91 per cent. Seventy-two per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 50 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 79 per cent (79 per cent for boys and 80 per cent for girls).

A 1993 study among 15 year old boys and girls found that 80.1 per cent of boys had tried alcohol, 9.5 per cent drank alcohol at least weekly and 30.4 per cent had been drunk at least twice. Of girls, 79.3 per cent had tried alcohol, 6.8 per cent drank alcohol at least weekly and 29.1 per cent had been drunk at least twice.

Economic impact of alcohol

The percentage of annual household expenditure devoted to alcoholic beverages was 4.9 in 1994, up from 4.4 in 1990

Mortality, morbidity, health and social problems from alcohol use

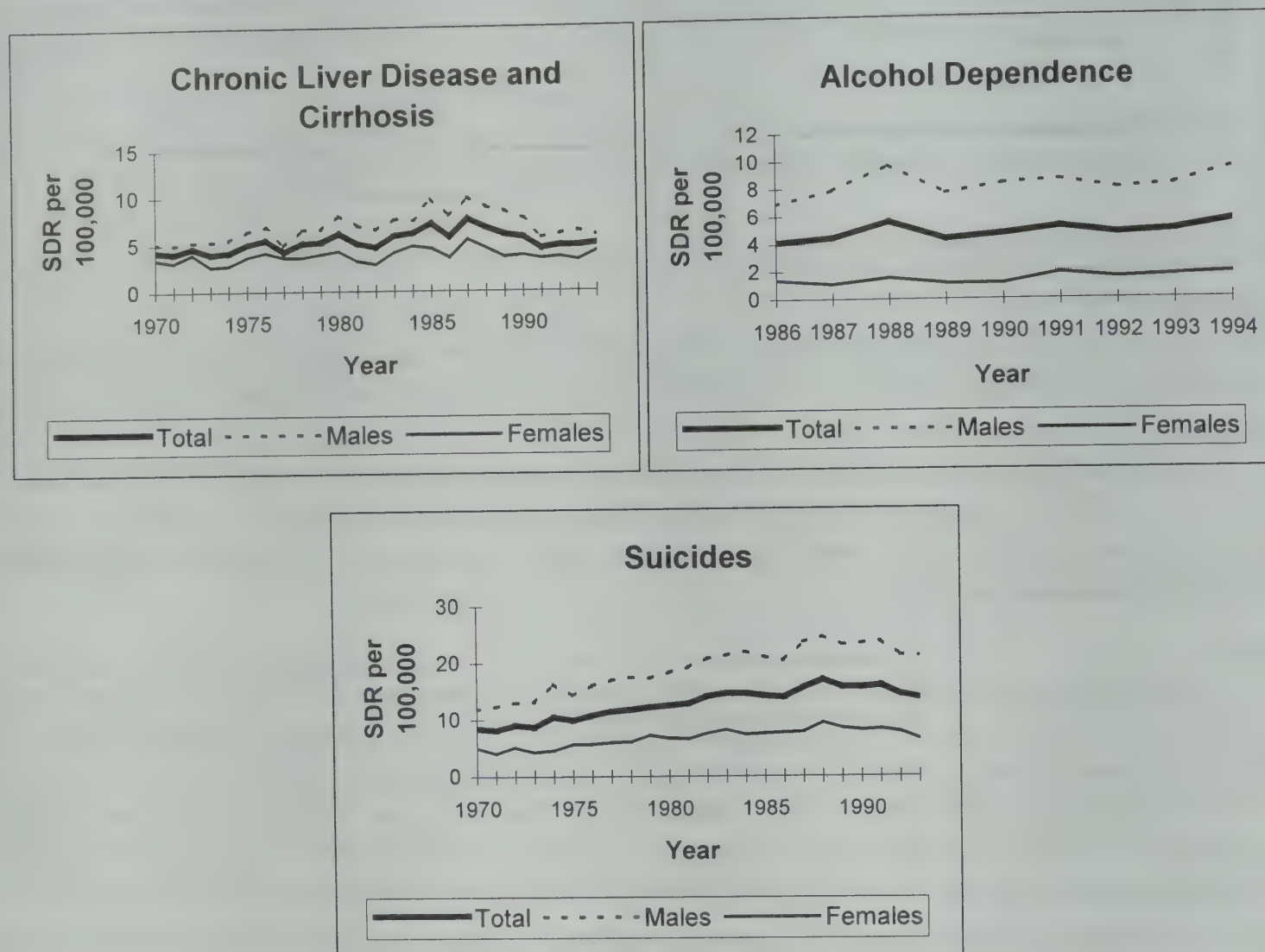
Alcohol dependence and related disorders

The rate per 100 000 population of persons discharged from hospital with alcoholic psychosis as either the primary or secondary diagnosis at admission was 9.1 in 1990 and 10.2 in 1991. The SDR per 100

000 population from alcohol dependence has slowly been rising in recent years, and is the world's sixth highest.

Mortality

In a 40-year follow-up study of 40 000 military conscripts, it was estimated that the relative risk of suicide among alcohol abusers was 6.9. The SDR per 100 000 population of chronic liver disease and cirrhosis was 4.5 (5.7 for men and 3 for women) in 1992 which represents a slight decrease from the 1980 rate of 5.8. The SDR reached its highest for the period at 7.4 in 1987.



Social problems

According to police reports in the 1980s, 50 per cent of all sexual crimes towards children were committed while under the influence of alcohol. Police estimate that alcohol is the background for every fifth divorce, involving about 2000 children in those families every year.

The number of cautions and arrests for public drunkenness per 100 000 population decreased from 2.2 to 1.9 between 1990 and 1993. According to police reports, 80 per cent of all crimes of violence, 60 per cent of all occurrences of rape, arson and vandalism, and 40 per cent of all burglaries and thefts are committed while under the influence of alcohol.

Alcohol policies

Control of alcohol products

The real price of all three types of alcohol, i.e. beer, spirits and wine has increased during the early 1990s. Table wines are taxed 65 per cent, beer (4 to 6 per cent alcohol) is taxed 61.5 per cent and spirits (over 35 per cent proof) are taxed 89.7 per cent.

There are restrictions on hours and days of sale and on type and location of outlets. Owing to the EEA (European Economic Area) agreement, in the summer of 1995 the Norwegian Government abolished the state monopoly on import, export and wholesale of alcoholic beverages. Private interests will be permitted to act in these sectors of the alcohol market along with the former state company, but licences are required. Drinking is banned in public places.

All advertising of alcohol in the media is prohibited. Moreover, alcoholic beverage products must not be included in advertisements for other goods or services. General or specific health warnings on

alcohol products are not required by law. There is a maximum legal limit of 60 per cent of pure alcohol per beverage, and labels giving alcohol content are required by law.

Control of alcohol problems

There is a minimum legal age limit of 18 for buying beer or wine and a minimum legal age limit of 20 for buying spirits. The BAC limit is 0.05 g% for drivers. On conviction for a first offence of driving above the permitted BAC, suspension of driving licence and/or imprisonment is usual. Random alcohol breath testing is carried out frequently.

The main objective of alcohol policies in the 1980s was to minimize medical and social problems caused by alcohol. This aim was expected to be reached by reducing average per capita consumption of alcoholic beverages by 25 per cent between 1975 and 2000. Means of achieving this objective were considered in a white paper presented to Parliament in 1988, when it received general approval. It is generally considered that the strong application of a number of alcohol policy measures has contributed to keeping consumption low. The main measures in this regard are the limited availability of alcohol and its high price. The Ministry of Health and Social Affairs is responsible for national alcohol policy (except for taxation which comes under the Ministry of Finance) and has general responsibility for alcohol and drug issues concerning secondary prevention and treatment. The National Directorate for the Prevention of Alcohol and Drug Problems is concerned with coordination of governmental work on alcohol and drug matters, promotion of education and information activities, linkage between government and private bodies and advisory activities to public authorities.

There are several mass media, school-based and workplace programmes which deal with alcohol only and also some programmes which deal with substance use in general. To promote an alcohol-free lifestyle, the authorities give considerable financial support to temperance and anti-drug organizations. A fund for alcohol-free hotels and serving places gives loans at low interest.

Alcohol data collection, research and treatment

The National Institute for Alcohol and Drug Research specializes in research on alcohol issues. It carries out annual postal surveys in Oslo on young people's alcohol, tobacco and drug habits (biannually on a national sample), and every sixth year a detailed survey is made on a representative sample of the total population. Statistics in Norway publishes numbers of persons in institutions for people with alcohol and drug problems but the groups are not reported out separately.

Efforts are being made to integrate services dealing with alcohol problems into the more general services for health and social care. SIFA (National Institute for Alcohol and Drug Research) has been given the responsibility of developing a National Documentation System to provide an overview of treatment facilities for alcohol and drug abusers. Types of institutions providing care for people with alcohol problems include detoxification clinics, clinics for alcohol dependents, health resorts, supervision homes and protection homes. The majority are privately owned but receive funds from the country for running costs. There are also about 25 Evangelical Centres run by the Pentecostal Church. Health and Social Welfare officers are responsible for organizing services for families.

Treatment policy has turned towards increasing the responsibility for care at community and country levels, with a reduction in the number of institutions and an increase in outpatient facilities. In 1985, there were about 70 institutions altogether, 68 per cent being owned and run by private organizations. The majority were religious temperance organizations such as Blue Cross. Since early 1985, the administrative responsibility for these institutions has been in the hands of the 19 county administrations. As far back as the early 1900s, special institutions for inpatient care of people with alcohol problems were the main form of treatment and care, so nearly every county has at least one such institution.

Poland

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	35 574 000	38 119 000	38 388 000
Adult (15+)	26 945 000	28 544 000	29 614 000
% Urban	58.2	62.5	64.7
% Rural	41.8	37.5	35.3

Health status

Life expectancy at birth, 1990-1995 : 66.7 (males), 75.7 (females)

Infant mortality rate in 1990-1995 : 15 per 1000 live births

Socioeconomic situation

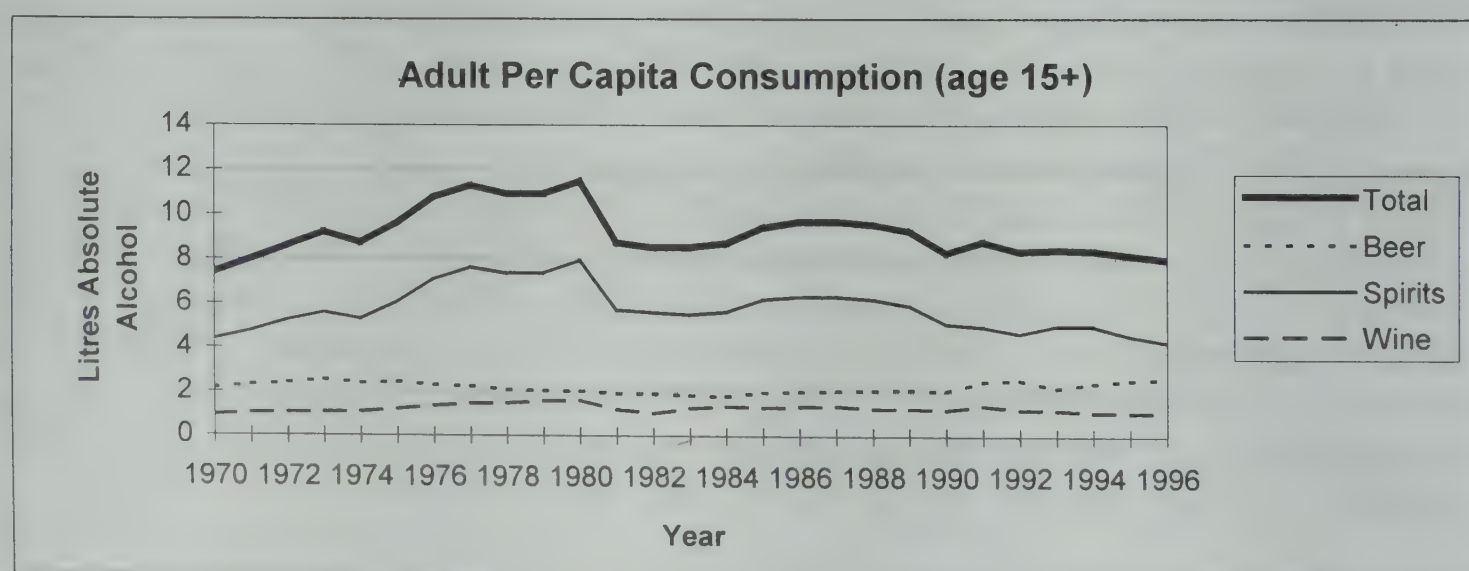
GNP per capita (US\$), 1995: 2790, PPP estimates of GNP per capita (current int'l \$), 1995: 5400.

Average distribution of labour force by sector, 1990-1992 : agriculture 27%; industry 37%; services 36%

Alcohol production, trade and industry

Poland produces beer, distilled spirits and wine. In 1985, the percentage of people employed in the alcohol industry was 0.83 per cent of total industrial employment. The top five brewers, each of which has signed on a foreign strategic partner, have a combined 55 per cent market share. Elbrewery Company Ltd, which is controlled by the Australian Brewpole Group, has the largest share of the Polish beer market. The controlling interest in Browary Tyskie, the country's second largest brewer, is owned by Kompania Piwna, whose leading shareholders include Euro Agro Centrum and South African Breweries, which plan a major investment in the brewer over the next five years. These two are also majority shareholders in fourth-ranking Lech Browary Wiepolsky. Heineken NV owns 32 per cent of the shares in Ywiec, the third largest brewer. Rounding out the top five is Okocim, of which Carlsberg owns nearly 32 per cent. All of these breweries have ambitious expansion plans, hoping that per capita beer consumption will its recent rise.

Alcohol consumption and prevalence



Consumption

Local experts estimate that unrecorded consumption in 1994 was 3.7 to 4.2 litres of pure alcohol. The State Agency for Prevention of Alcohol Problems estimated that illegal production and smuggling totalled between 20 and 25 per cent of the legal trade. These combine to suggest that actual per capita consumption in 1994 was between 14.47 and 15.7 litres of absolute alcohol per adult, as opposed to 8.36 litres per adult recorded consumption.

Prevalence

A national sample survey of drinking habits among people 15 years or older in 1984 found that more than one quarter had not drunk alcohol during the previous 12 months. About 64 per cent were moderate drinkers, and 10.4 per cent were classified as abusers. A 1993 nationwide sample of 2000 adults found that 23.7 per cent of males age 18 or over drank more than 150 grams of alcohol per week, while only 3.6 per cent of females drank greater than 115 grams per week. Eleven per cent of adults abstained completely from alcohol.

Age patterns

A study of 8940 15 to 16 year olds (4494 boys and 4349 girls) was conducted in 1995. The response rate was 84 per cent (81 per cent for boys and 85 per cent for girls). Eighty per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 44 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 92 per cent (93 per cent for boys and 90 per cent for girls).

Studies of young people in the early 1980s showed that, by the age of 14 years, 50 per cent drank periodically and by the age of 15 to 19 years, the number of boys who drink had increased by 100 per cent. A 1993/1994 survey among 15 year old boys and girls revealed that almost 90 per cent of boys and 87 per cent of girls have tried alcoholic beverages. Twenty-two per cent of boys and 9.2 per cent of girls drink at least weekly, and 33 per cent of boys have been drunk at least twice, compared with 18 per cent of girls.

Economic impact of alcohol

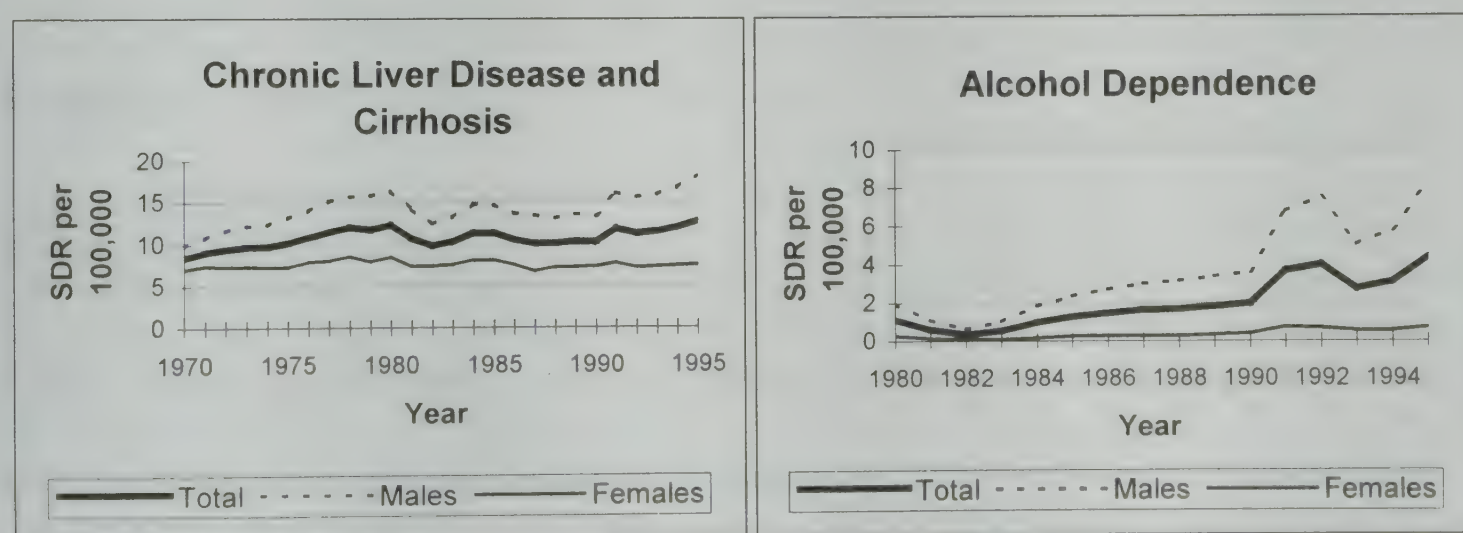
The per capita expenditure on alcoholic beverages as a per cent of the total per capita expenditure went from 9.9 per cent in 1960, up to 13.6 per cent in 1985, and fell to 6.8 per cent in 1993.

In 1995, the estimated costs of alcohol-related health and social problems were US\$ 2500 million, and alcohol revenue was 4.9 per cent of total government revenue. Of the total taxes collected from alcohol (excise, VAT and trade tax), 0.25 per cent is earmarked for the treatment of alcohol related problems. The estimated cost of alcohol programmes in 1996 was US\$ 5 million.

Mortality, morbidity, health and social problems from alcohol use

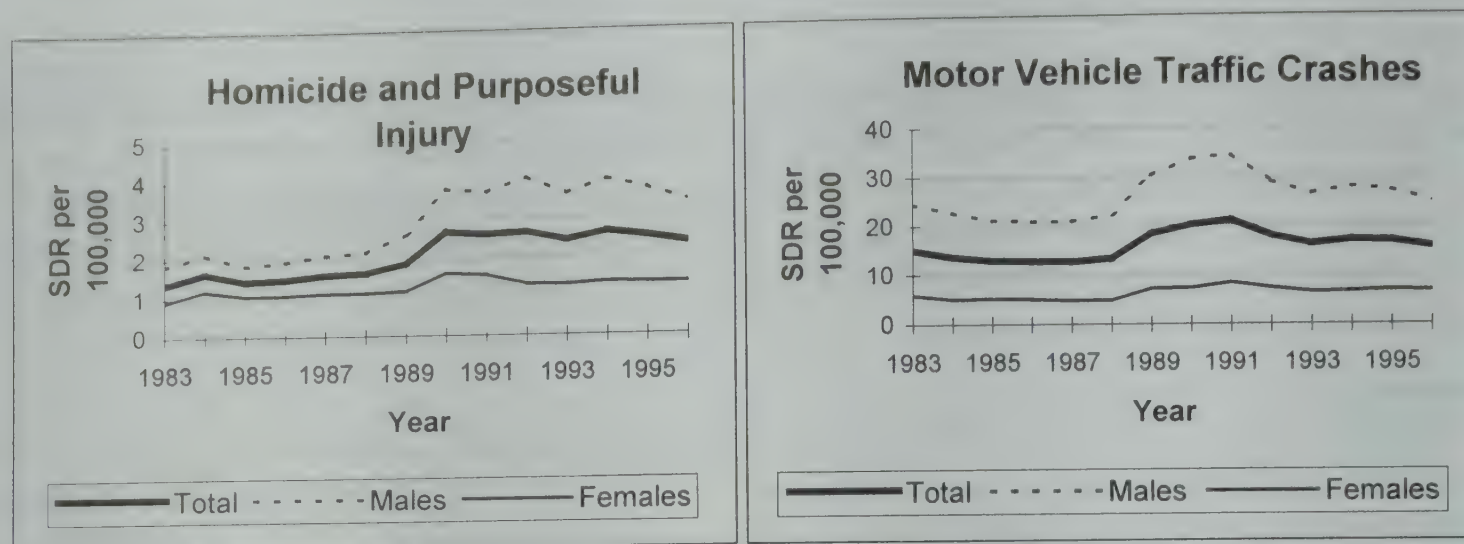
Alcohol dependence and related disorders

The SDR from alcohol dependence has risen steadily in recent years, from 1.1 to 4.3 per 100 000 population between 1980 and 1995. The rate of admission to inpatient care per 100 000 population for alcoholic psychosis rose from 23 in 1980 to 30.2 in 1991, before falling back to 27.4 in 1991.



Mortality

The percentage of homicides committed while intoxicated rose from 53.9 per cent to 75 per cent between 1970 and 1985. The number of alcohol-related fatal motor vehicle crashes fell from 453 in 1960 to 2199 in 1991.



Social Problems

Among people detained in sobering-up stations in 1985, 2169 were less than 18 years old, and 95 470 were between the ages of 19 and 24. In the 1980s about 25 per cent of all divorces were considered to result from excessive drinking, and it was estimated that about one million children were being brought up in families with alcohol problems. The percentage of rapes committed while intoxicated rose from 53.2 per cent in 1970 to 81.9 per cent in 1985.

Alcohol policies

Control of alcohol products

Between 1990 and 1994, the real prices of beer and wine increased while the real price of spirits fell.

A licence is required for the production of spirits and the distribution of all three types of alcohol, i.e. beer, spirits and wine. Control of the alcohol market weakened significantly as a result of the decentralization of decision making on the number and location of liquor stores. There are restrictions on type of outlets, but these restrictions are not effectively enforced. Specific restrictions are developed at a local community level.

The advertising of wine and spirits is prohibited, and penalties now range from US\$ 3300 to US\$ 167 000. In 1998 the House of Parliament voted to allow beer advertising. The advertising of alcohol-free beer is still permitted as well. Labels for alcohol content are required by law, and there is no maximum legal limit for the alcohol content of beverages.

Poland has some legislation to support environments free from alcohol.

Control of alcohol problems

There is a minimum legal age limit of 18 for buying alcohol but it is not effectively enforced. The BAC limit is 0.03 g% for drivers. Upon conviction for a first offence of driving above the BAC limit, suspension of driving licence is usual (and imprisonment for a second offence). Random alcohol breath testing is also carried out infrequently.

The State Agency for Prevention of Alcohol-Related Problems supports the educational initiatives of several nongovernmental organizations, and there are national school-based programmes which deal with substance use. A new prevention programme developed by the State Agency for school children was designed to reach 250 000 school children and 3000 teachers in 1994. The Church and the denominational organizations are engaged in various activities concerning prevention, support and information.

The First Permanent Commission for Counteracting Alcoholism was established at the Council of Ministers as early as 1956. During 1983-1987, it was headed by the Deputy Prime Minister, although, in 1987 leadership was transferred from the Council of Ministers to the Ministry of Health. Its position as the central agency for alcohol prevention has slowly been usurped by the State Agency for Prevention of Alcohol-Related Problems, which works in cooperation with regional agencies.

Alcohol data collection, research and treatment

The Central Statistical Office, the Central Bureau of Statistics and the Institute of Psychiatry and Neurology all collect data regarding alcohol.

Since November 1987, the Commission for Counteracting Alcoholism has functioned in the Ministry of Health and Social Welfare. The Commission brings together representatives of ministries and voluntary organizations. In 1981, an interdisciplinary research programme on "health and social problems associated with alcohol" was set up. The programme was initiated and coordinated by the Institute of Psychiatry and Neurology. More than 50 scientific research units joined in the programme between 1981 and 1985, and approximately 70 themes and studies were carried out in various institutions of the Polish Academy of Sciences, at six universities, eight medical schools and many other centres all over the country.

Beginning in 1982, "other dependence-producing substances" were included in the programme. During 1986-1990 the programme was further expanded. In the beginning of the 1990s, alcohol research lost priority and funds, but in 1995 the State Agency for Prevention of Alcohol-Related Problems and the Institute of Psychiatry and Neurology established the Council for Alcohol Research to make decisions regarding grants for alcohol research. Currently 13 projects are funded by the council.

Alcohol problems are considered in the undergraduate medical courses on psychiatry for physicians and nurses, and a wide range of courses are run by the Institute of Social Prevention and Re-socialization, University of Warsaw, and by the Institute of Psychiatry and Neurology. The Ministry of Justice is responsible for training personnel in prisons and detention homes. Other groups receiving training in dealing with alcohol problems include the police, lawyers, teachers, sociologists, employees in trade and catering, activists in youth organizations, reporters and others working in the mass media.

Starting in the 1950s, long-term inpatient treatment was used regularly, but this system began to change following the 1982 law and the new programmes of the Ministry of Health and Welfare, which emphasize the involvement of both primary and specialized care services in the prevention and treatment of alcohol problems. Certain voluntary organizations run alcohol clinics and rehabilitation units and organize psycho-social activities, with some providing counselling not only for people with alcohol problems, but also for their families. In 1995, there were approximately 400 outpatient alcohol clinics, 16 day care centres and several hostels. Poland also provides more than 60 major residential treatment services. Many of these are located in psychiatric hospitals, and are generally set up to treat large numbers of people (46 psychiatric hospitals with 2300 beds). A further 11 wards are available in general medical facilities and these provide 339 beds. The Government Council for Family Problems has proposed to incorporate family protection programmes for families with alcohol problems into the more general programmes which serve to aid families in poor economic circumstances, and socially neglected children.

Portugal

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 766 000	9 868 000	9 823 000
Adult (15+)	7 232 000	7 807 000	7 970 000
% Urban	29.4	33.5	35.6
% Rural	70.6	66.5	64.4

Health status

Life expectancy at birth, 1990-1995 : 71.1 (males), 78.0 (females)
Infant mortality rate in 1990-1995 : 10 per 000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 9470, PPP estimates of GNP per capita (current int'l \$), 1995: 12 760.

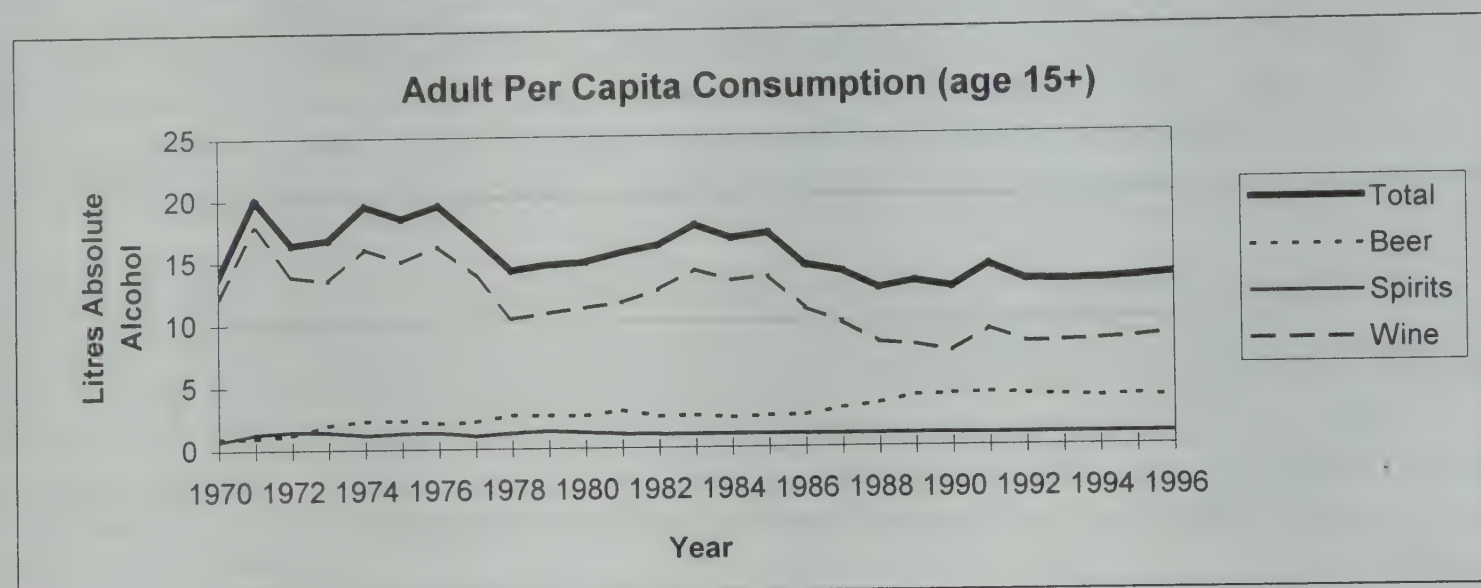
Average distribution of labour force by sector, 1990-1992 : agriculture 17%; industry 34%; services 49%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Portugal produces beer, distilled spirits and wine. It is a major exporter of wine.

Alcohol consumption and prevalence



Consumption

Production of wine, Portugal's chief alcoholic product, has led to a decrease in adult per capita alcohol consumption in the past 25 years, which has been slightly counterbalanced by a modest increase in beer consumption. There is no information available on unrecorded consumption.

Prevalence

A 1990 survey of a sample of the population aged 15 years and over showed that 39 per cent drank alcohol at least three to four days per week, 24 per cent were moderate consumers (drinking at least weekly) and 37 per cent drank less than weekly or never.

Age patterns

A study of 2033 15 to 16 year olds (852 boys and 1181 girls) was conducted in 1995. The response rate was 92 per cent. Seventy-four per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 28 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 79 per cent (80 per cent for boys and 78 per cent for girls).

In a series of surveys in public schools in various regions between 1987 and 1993, lifetime prevalence of alcohol use among 12 to 18 year olds was shown to be about 60 per cent. Prevalence of use in the previous 30 days varied between 27 per cent and 42 per cent. A 1990 survey showed that 7 per cent of boys aged 11 or 12 years, and 19 per cent of boys between the ages of 13 and 15 drank alcohol weekly. Of girls, three per cent of those aged 11 or 12 and seven per cent of those between the ages of 13 and 15 drank alcohol weekly.

Alcohol use among population subgroups

Prison surveys of male prisoners in Portugal have shown a before-prison prevalence of 86.3 per cent for alcohol use and a use-in-prison prevalence of 63.8 per cent.

Economic impact of alcohol

About five per cent of the active population (20 per cent of active agricultural workers) are employed in viticulture (240 000 workers). More than a tenth of the population (1.2 million) are directly economically dependent on wine production and trade.

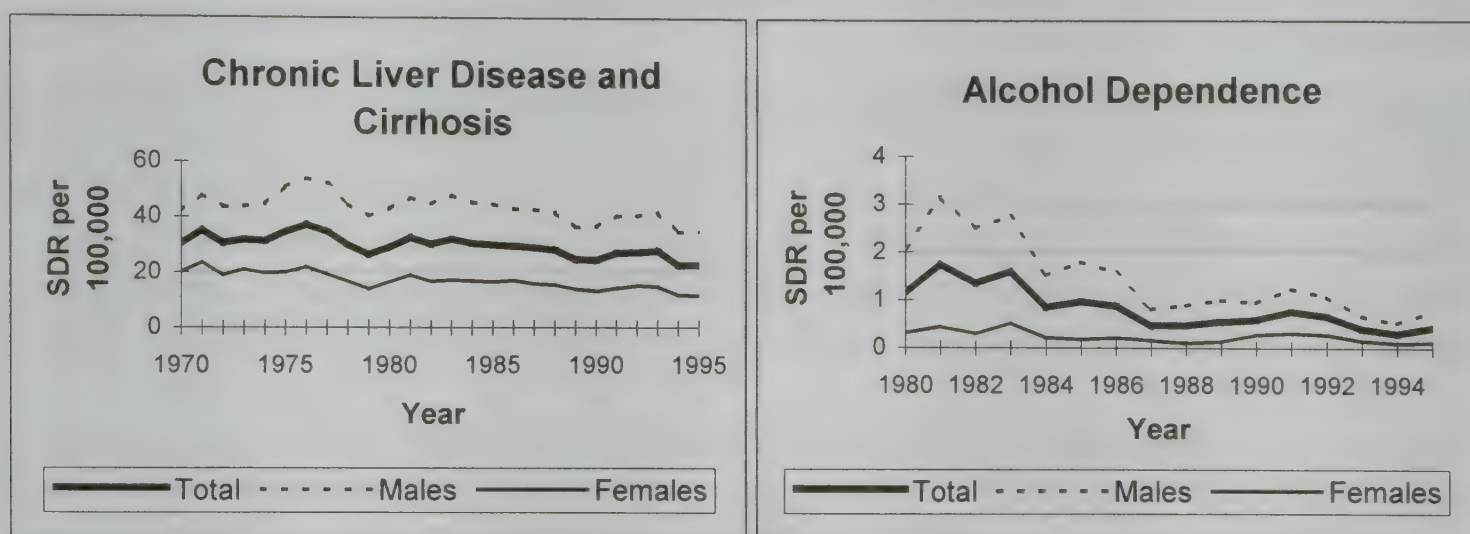
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The SDR for alcohol dependence fell from 1.14 to 0.43 per 100 000 population between 1980 and 1995.

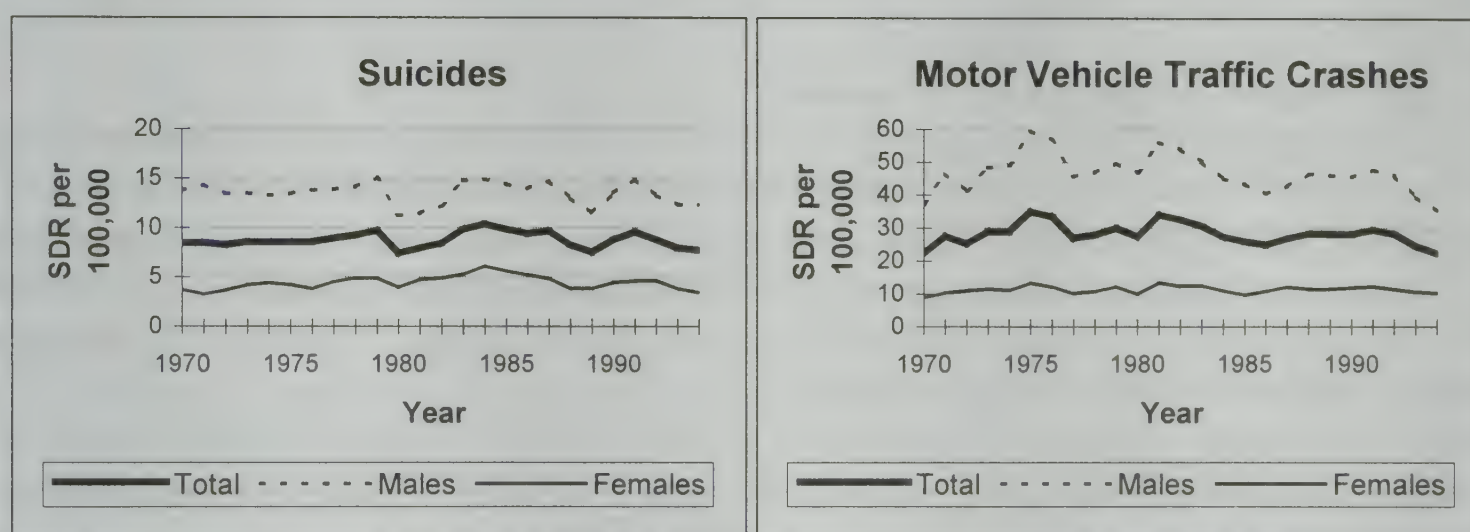
Mortality

An analysis of regional and temporal co-variation of suicide rates and indicators of alcohol use and abuse in Portugal revealed that an increase in per capita consumption of alcohol is accompanied by a simultaneous increase in the male suicide rate of 1.9 per cent. The SDR per 100 000 population for chronic liver disease fell from 30.3 to 22.7 between 1970 and 1995.



Social problems

The number of alcohol-related motor vehicle crashes per 100 000 population rose from 18 to 23.2 between 1988 and 1992.



Alcohol policies

Control of alcohol products

The real prices of beer, wine and spirits have been increasing during the early 1990s. There are no restrictions on hours or days of sale or on type of location of outlets. A licence is required for the production and distribution of beer, wine and spirits.

The advertising of all three types of alcoholic beverages, i.e. beer, spirits and wine is restricted on radio and television, and the advertising of beer and spirits is banned on billboards and in cinemas. There are no restrictions on the advertising of alcohol in the print media. Alcohol advertising is not allowed inside schools or in any publication addressed to young people under 18 years of age, and the advertisement cannot connect the product to people under 18 years of age or present them drinking alcoholic beverages. Advertisements are not allowed to encourage excessive drinking or to intimidate non-drinkers, and they cannot suggest that alcohol will lead to social success or provide increased ability, or that alcohol has therapeutic properties, is a stimulant or a sedative. Advertisements cannot associate alcohol with positive properties, with driving or with physical exercise, or with sporting activities.

The advertising restrictions are enforced through the application of the "Publicity Code", a national law created in 1990 and revised in 1995. Enforcement occurs after a breach and is the responsibility of the General Direction of Social Communication and the National Institute of Consumers Defence. There have been many breaches, and little action has been taken to enforce the ban.

Labels for alcohol content are required by law, and the maximum legal limit for alcohol content of "green wine" is 12 per cent. General and specific health warnings are not required by law.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcohol, but it is infrequently enforced. BAC limit is 0.05 g% for drivers. On conviction for a first offence of driving above the permitted BAC, suspension of driving licence or imprisonment is usual. Random alcohol breath testing is frequently carried out.

The National Committee against Alcoholism (NCA) is the national agency dealing with the prevention of alcohol problems. Until November 1988, there was no explicit policy statement concerning alcohol. However at the end of 1986 the NCA presented to the Minister of Health the following proposals: recommendations for legislation on measures to prevent alcohol problems; a draft comprehensive national programme on alcohol defining priorities; suggestions for establishing an inter-ministerial coordinating committee on alcohol problems, comprising personnel from various ministries and other bodies.

A 1988 government decree established Regional Alcoholology Centres in Coimbra, Lisbon and Oporto. Their main objectives are prevention and treatment of alcohol-related problems in their respective zones, in collaboration with the regional health and welfare administrations and centres. These three regional alcohol agencies play a significant role in the treatment and prevention of alcohol problems.

There are national mass media programmes dealing with drinking and driving. Other alcohol education programmes are undertaken by various agencies and individuals. Some pilot training is now being given to general practitioners, and there are some courses on alcohol problems within public health training.

Alcohol data collection, research and treatment

The National Institute of Statistics and the International Wine Bureau both collect some data on alcohol but there is no specific national agency responsible for all relevant data collection.

Treatment until recently was mainly confined to inpatient treatment in the three zone centres attached to large psychiatric hospitals. Greater attention is now being given to small units for the treatment of alcohol dependents in local health centres and mental health centres. Training for decentralized treatment is being stimulated by the zone centres.

In 1998 the Portuguese Government created three Regional Alcohol Centres to prevent alcohol abuse and coordinate alcohol-related activities as well as to treat people with alcohol-related problems. The Centres cover the northern, central and southern regions of Portugal.

Republic of Moldova (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 011 000	4 362 000	4 432 000
Adult (15+)	2 938 000	3 145 000	3 263 000
% Urban	39.9	47.8	51.7
% Rural	60.1	52.2	48.3

Health status

Life expectancy at birth, 1990-1995 : 63.5 (males), 71.6 (females)

Infant mortality rate in 1990-1995 : 25 per 1000 live births

Socioeconomic situation

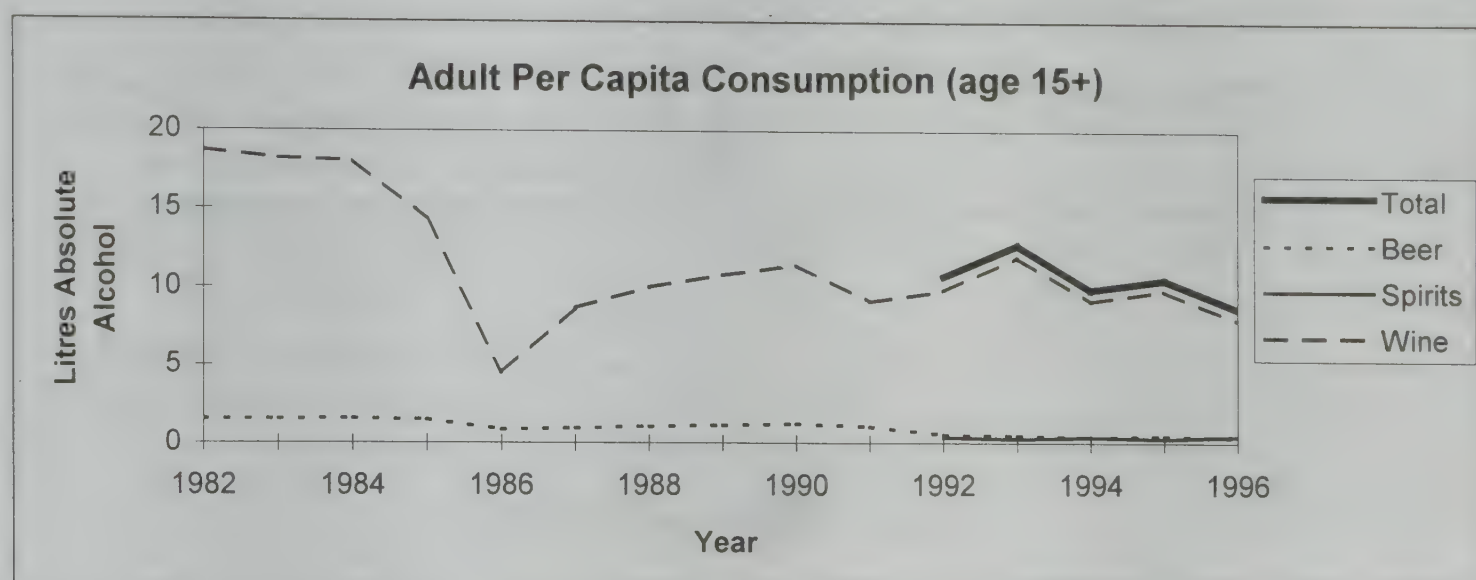
GNP per capita (US\$), 1995: 920

Average distribution of labour force by sector, 1990-1992 : agriculture 21%; industry 26%; services 53%

Alcohol production, trade and industry

The Republic of Moldova produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

There is no quantified information available on unrecorded consumption. However, it is known that domestic alcohol production is about 40 to 70 per cent of state production. At present there is a large amount of unrecorded alcohol imports which is distributed illegally in the Republic of Moldova, and there is also diversion of spirits intended for other use into beverage making. It is estimated that, in all, unregistered consumption accounts for about 70 per cent of total consumption. Recorded consumption in 1996 was approximately 8.6 litres of absolute alcohol per adult. Taking the midpoint of estimated unrecorded consumption, total consumption, including unregistered, would then be approximately 15.6 litres of absolute alcohol per adult.

Prevalence

It is estimated that 15 per 1000 people drink heavily and that about 20 per cent of these are women.

Economic impact of alcohol

Consumer expenditure on alcoholic drinks, as a percentage of general expenditure on purchase of goods and payments for services, dropped from 2.6 to 1.9 between 1990 and 1995. Wine accounts for between 35 and 40 per cent of the Republic of Moldova's gross domestic product.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

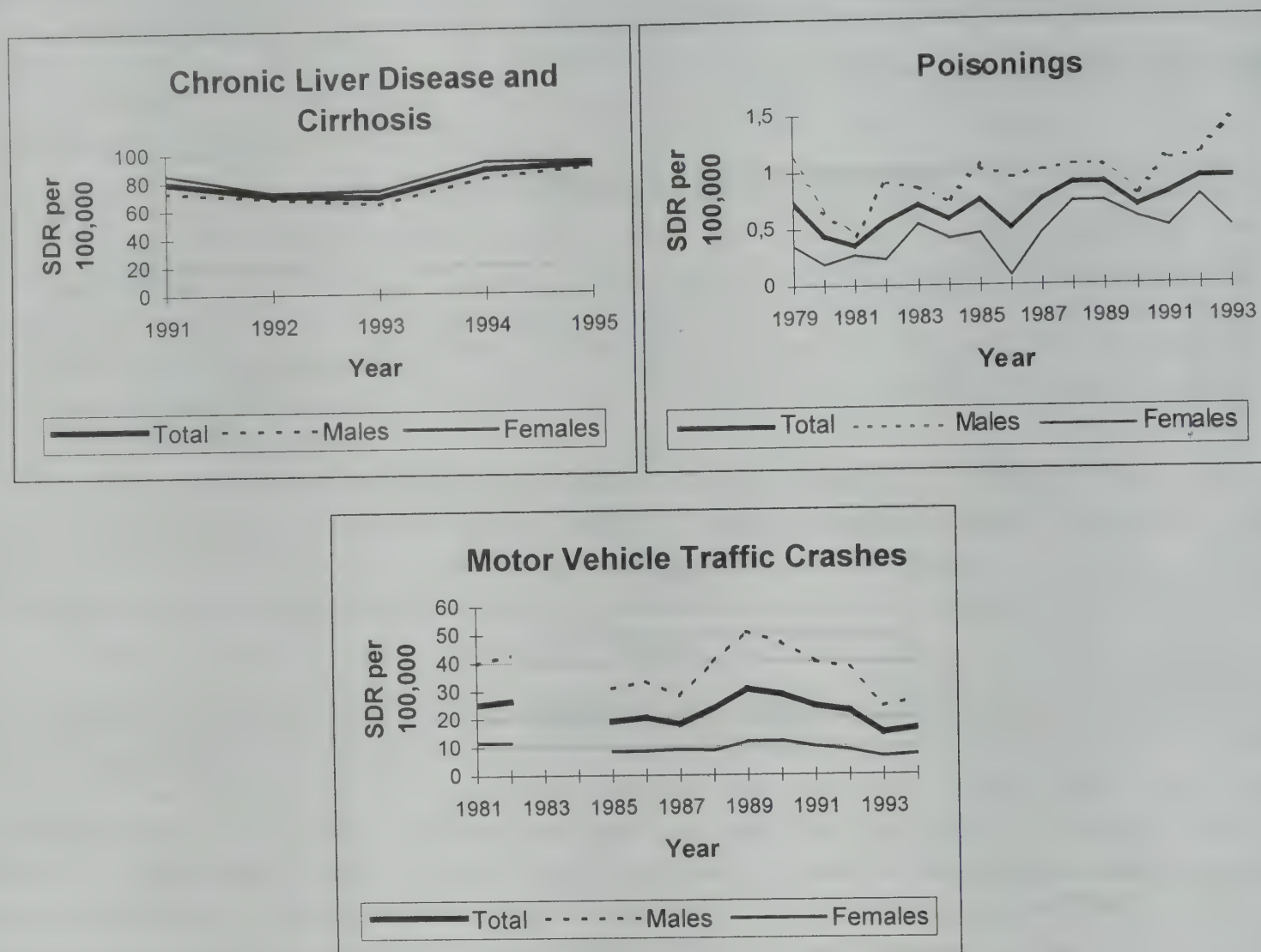
The SDR per 100 000 population has risen rapidly in recent years, placing the country among the top ten countries most heavily affected by alcohol dependence.

The recorded morbidity rate for alcohol dependence (per 100 000 population) fell by 4.4 per cent between 1990 and 1991 (1598.8 and 1529.9, respectively), while the morbidity indicators for alcoholic psychosis rose by 47.1 per cent (from 10 to 14.7) during the same period. The rate of admission to inpatient care (per 100 000 population) for alcoholic psychosis was 9.4 in 1993, compared to 25.5 in 1985 and 14.7 in 1991. The number of patients (per 100 000 population) with alcohol dependence registered at hospitals and other treatment centres during the year fell from 5.5 in 1990 to 3.4 in 1992, then increased to 5 in 1990.

The number of people treated for alcohol dependence in outpatient centres has recently decreased. This decrease in treatment is explained by the lack of medicines for treatment and the high prices of those medicines which are available.

Mortality

The SDR per 100 000 population (all ages) for chronic liver disease and cirrhosis was 90.7 in 1995. This represents an increase from the 79.3 per 100 000 reported in 1980, being the highest rate in the world.



Social problems

The SDR from alcohol-related motor vehicle traffic crashes per 100 000 inhabitants was 0.4 in 1993. The number of motor vehicle traffic crashes involving alcohol was 11 per 100 000 population in 1992. The number of persons committing crimes under the influence of alcohol (thousands) increased from 5.5 in 1990 to 6.4 in 1994, then fell to 4.9 in 1995.

Alcohol policies

Control of alcohol products

The trend in the real prices of wine and spirits has been stable but the trend in the real price of beer has been increasing during the early 1990s. Table wines are taxed at between 5 and 8 per cent, beer (containing 4 to 6 per cent alcohol) is taxed 18 per cent and spirits (over 35 per cent proof) are taxed 18 per cent.

The draft National Alcohol Plan proposes restrictions on the sale of alcoholic beverages including the introduction of an age limit. However, public concern has already led to the introduction of some control measures, such as regulation of the retail trade in alcohol, restrictions on hours and days of sale and on number of outlets, a licensing system for distribution of alcoholic beverages, and taxation. During the anti-alcohol campaign in the mid 1980s in the former USSR, the State in Moldova completely controlled production and distribution of hard liquor and about 85 per cent of wine. The political, economic and social changes of 1990-1992 led to the disappearance of the state monopoly but there has been some discussion about its re-establishment.

There are no restrictions on the advertising of alcohol. Labels for alcohol content are required by law. There is a maximum legal limit of 42 per cent for the alcohol content of vodka/cognac, 16 per cent for wine and 4 to 6 per cent for beer.

Control of alcohol problems

There is a minimum legal age limit of 18 years for the purchase of alcohol. The BAC limit is 0.03 g%. Breath testing is obligatory after motor vehicle crashes or if a person is suspected of using alcohol at work. Otherwise current law only requires establishment of BAC in cases of unconsciousness or severe poisoning. Priorities of the early 1990s have been reducing availability; increasing the role of primary health care teams in the prevention and early detection of alcohol problems; developing the role of the social welfare and criminal justice system in the prevention and management of alcohol problems; developing specialized treatment for alcohol dependence and other alcohol problems and addressing particular alcohol problems such as drinking and driving.

Some substantial changes took place in alcohol and drug policy during 1993 and 1994. National programmes on alcohol and drugs were prepared. While the drug programme was adopted by parliament, the alcohol programme was still under discussion as of late 1995. The proposed strategy and approaches of the draft National Alcohol Programme are in line with the European Alcohol Action Plan. The draft plan is multi-sectoral in perspective and proposes a range of health, social, economic and legislative measures.

The Republican Dispensary of Narcology (RDN) is the national agency dealing with the prevention of alcohol problems. It coordinates all prevention activities of other relevant agencies in the Republic of Moldova. The RDN prepares information for the mass media. There are no national alcohol education programmes in schools or workplaces.

Alcohol data collection, research and treatment

The RDN has a network of two specialized hospitals, three specialized dispensaries and 40 consulting rooms. It is also responsible for about between 70 and 80 per cent of outpatient treatment services for heavy drinkers.

Romania

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	22 201 000	23 207 000	22 835 000
Adult (15+)	16 278 000	17 736 000	18 166 000
% Urban	49.0	53.3	55.4
% Rural	51.0	46.7	44.6

Health status

Life expectancy at birth, 1990-1995 : 66.6 (males), 73.3 (females)
Infant mortality rate in 1990-1995 : 23 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1480, PPP estimates of GNP per capita (current int'l \$), 1995: 4360.
Average distribution of labour force, 1990-1992: agriculture 29%; industry 43%; services 28%

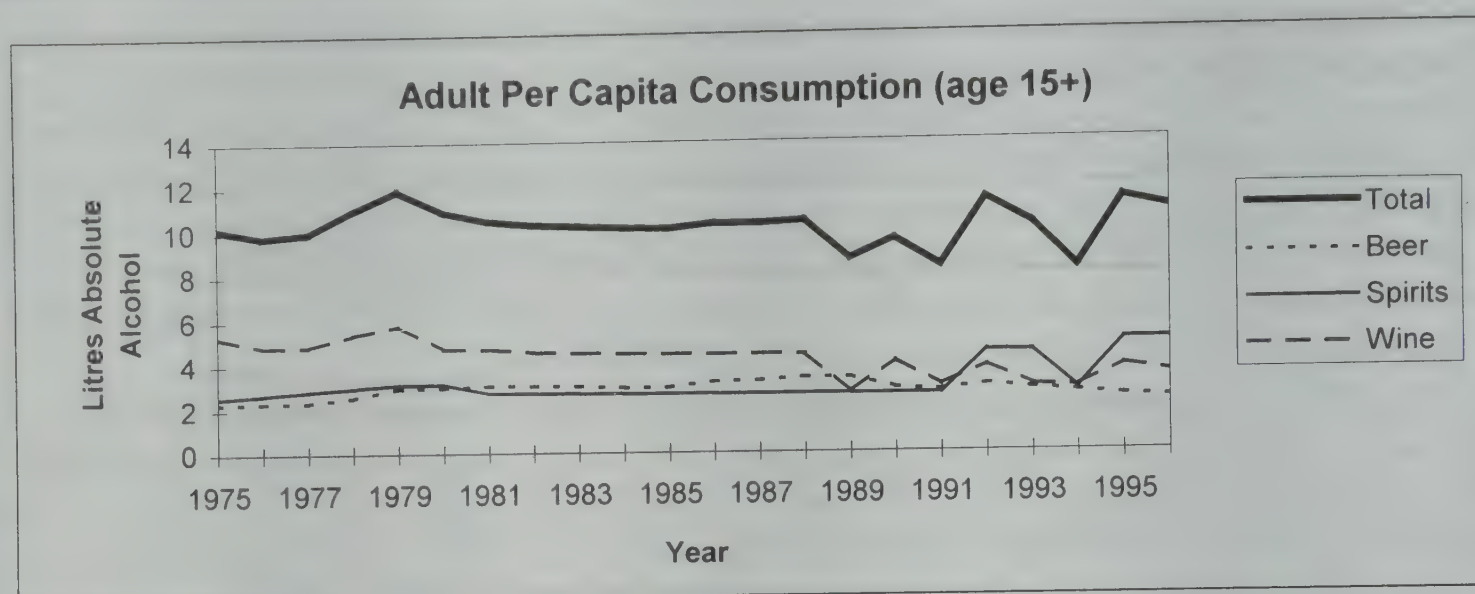
Alcohol production, trade and industry

Romania produces beer, distilled spirits and wine. South African Breweries owns the largest brewery. Belgium-based Interbrew has also bought interests in breweries in Romania.

New taxes levied in 1993 on distilled spirits all but eradicated imports and contributed to widespread smuggling. Lobbying from the industry succeeded in lowering the taxes on brandy and vodka to 100 per cent, and on whisky to 150 per cent. At least two distillers – Diageo (formerly IDV) and Fenshaw

International - eliminated these costs by forming joint ventures and producing their products within Romania.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption has fluctuated considerably since the late 1980s. Increases in spirits consumption have come primarily from imports. Information on unrecorded consumption is not available.

Prevalence

A 1992 population survey of people 20 years and older found 77 per cent of males to be drinkers, with 16 per cent drinking daily. Among women, 47 per cent were drinkers, and two per cent drank daily. This represents an increase over 1989, particularly among females. Consumption was higher in rural areas, among males aged 30 to 59, among females aged 20 to 29, and among qualified workers.

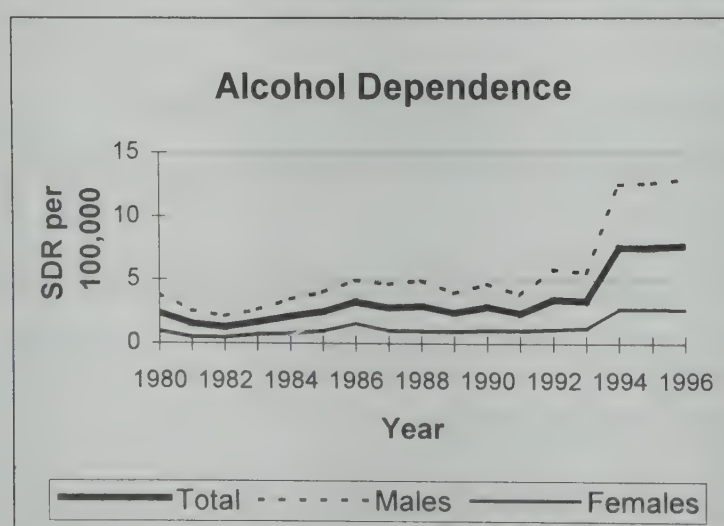
Economic impact of alcohol

On average, 11 per cent of household expenditures were spent on alcohol in 1991.

Mortality, morbidity, health and social problems from alcohol use

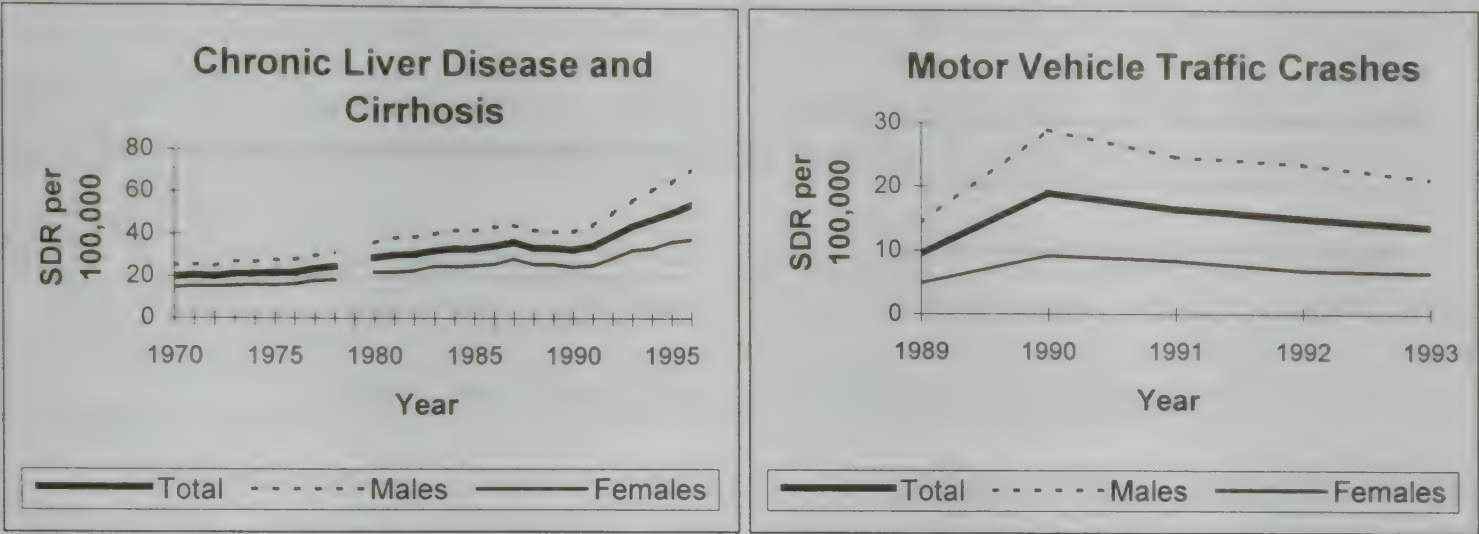
Alcohol dependence and related disorders

As a result of a sharp increase in the mid-1990s, Romania has the one of the highest SDR per 100 000 population from alcohol dependence in the world. The rate per 100 000 population of inpatient treatment for alcoholic psychosis dropped from 37.1 to 29.1 between 1980 and 1991, then rose to 47.7 in 1993.



Mortality

The SDR for chronic liver disease rose from 32.7 to 44.7 between 1980 and 1993.



Social problems

The number of alcohol-related motor vehicle crashes per 100 000 population was 2.5 in 1985, 1.7 in 1989 and 2.3 in 1992. In 1993 four per cent of all traffic crashes were alcohol-related.

Alcohol policies

Control of alcohol products

Prior to 1993, there were no excise taxes, and the import duty on spirits was 25 per cent. In 1993 the government instituted a tax of 300 per cent on imported whisky, 200 per cent on vodka, and similar amounts on other types of alcohol. In June of 1995, customs duties were increased to 269.5 per cent. After heavy lobbying from the industry, the taxes on brandy and vodka were decreased to 100 per cent, and on whisky to 150 per cent. The real prices of all three types of alcohol i.e. beer, spirits and wine have been increasing during the past five years.

The advertising of all three types of alcoholic beverages is restricted on television and radio, and the advertising of spirits is restricted in newspapers and magazines. Labels for alcohol content on alcohol products are required by law.

Control of alcohol problems

There is a minimum legal age limit of 18 for buying alcohol, and this restriction is fairly effectively enforced. The BAC limit is 0.0 g% for drivers. A conviction for a first offence of driving above this limit will usually result in the suspension of the driver's licence. Random alcohol breath testing is frequently carried out. Alcohol consumption is forbidden in educational institutions and in workplaces which are considered hazardous. There are some mass media programmes which deal with substance abuse.

Alcohol data collection, research and treatment

There is no national agency for the prevention of alcohol problems. The Centre for Health Statistics and Medical Documentation in Bucharest is involved in alcohol-related data collection.

Russian Federation (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	138 483 000	147 913 000	147 000 000
Adult (15+)	108 505 000	113 952 000	116 050 000
% Urban	69.8	74.0	76.0
% Rural	30.3	26.0	24.0

Health status

Life expectancy at birth, 1990-1995 : 61.7 (males), 73.6 (females)

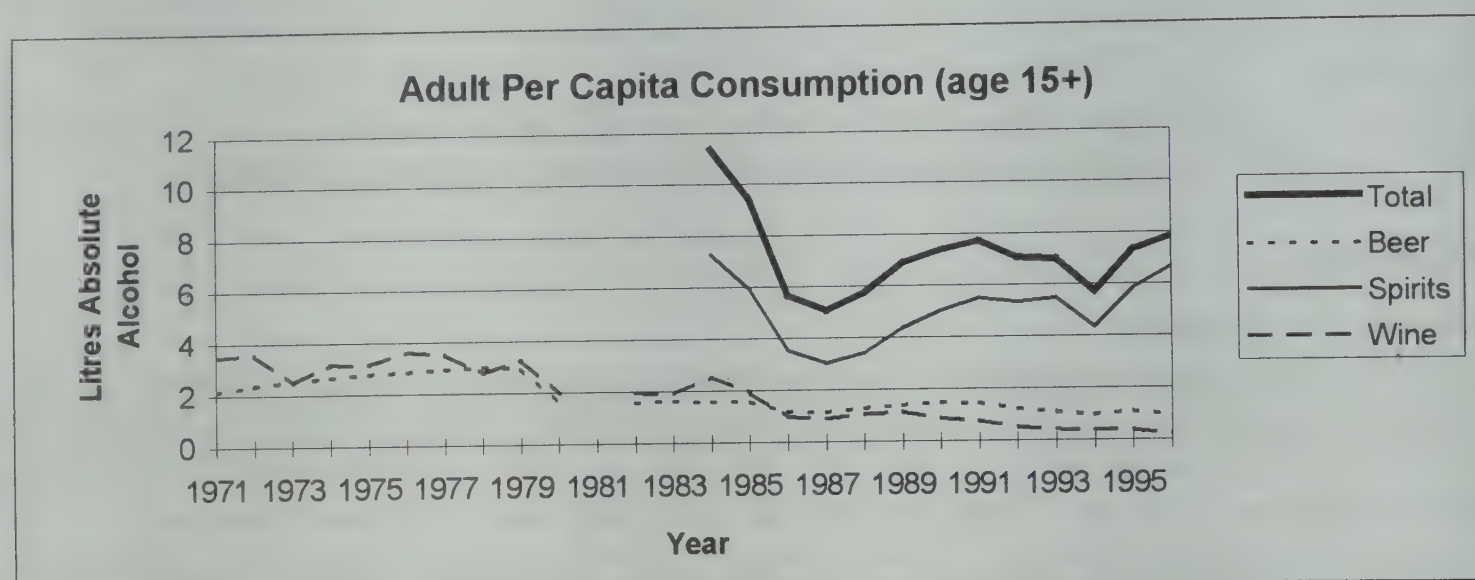
Infant mortality rate in 1990-1995 : 21 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2240, PPP estimates of GNP per capita (current int'l \$), 1995: 4480
Average distribution of labour force by sector, 1990-1992 : agriculture 20%; industry 46%; services 34%

In 1996, Russian President Boris Yeltsin announced the government take-over of all alcohol production and marketing to finance massive governmental debt, to take effect in January 1997. There are numerous joint ventures between Russian manufacturers and foreign alcohol corporations. There is also reportedly widespread illegal production of alcohol, particularly vodka.

Alcohol consumption and prevalence



Consumption

In 1993 unrecorded consumption was estimated at 4.5 litres per capita in 1985 and 7.5 litres per capita. This implies that total adult per capita consumption in 1993 was 14.5 litres of pure alcohol. (Note: Figures prior to 1990 are for the former USSR.)

Age patterns

Results of a study on 15 year old boys and girls in the region of St. Petersburg for 1993/1994 showed that 80 per cent of boys had tried alcoholic beverages, 17.3 per cent drank alcoholic beverages at least once a week and 20.8 per cent had been drunk at least twice. Of girls, 83.5 per cent had ever tried alcoholic beverages, 6.2 per cent drank alcoholic beverages at least once a week and 12.3 per cent had been drunk at least twice.

Economic impact of alcohol

In 1995, alcoholic beverages constituted 2.5 per cent of total consumer expenditure, down from 5 per cent in 1990. Illicit production costs the government an estimated US\$ 360 million annually in lost tax revenues.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of patients suffering from alcoholic psychosis registered at outpatient departments (per 10 000 population, all ages) fell from 3.5 to 1.8 between 1984 and 1990, while the rate of admission to inpatient care for alcoholic psychosis (per 100 000 population) rose from 74.6 to 83.3 between 1980 and 1993. The number of alcohol dependent patients registered at outpatient departments (per 10 000 population, all ages) decreased from 183.9 to 177.3 between 1984 and 1990, while the number of persons admitted to inpatient treatment suffering from alcohol dependence (per 10 000 population) decreased from 31.2 to 26.4 during the same period.

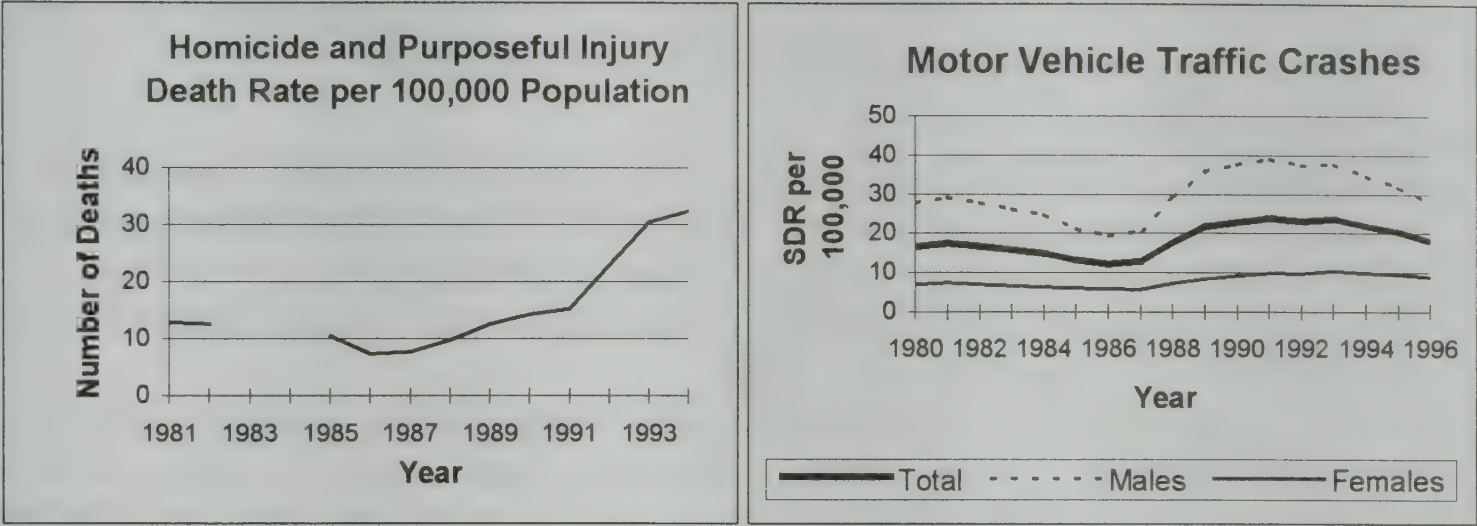
Mortality

Mortality from alcohol-related disease in general dropped during the mid-1980s, and then rose sharply in the early 1990s. The main factor for this was a sharp fall, then increase in death by alcohol

poisoning, which accounted for 80 per cent of male and 70 per cent of female alcohol-related deaths under age 45 in 1987.

AGE-STANDARDISED MORTALITY RATES PER 100 000 POPULATION FROM ALCOHOL-RELATED DISEASE		
Year	Male	Female
1984	455	123
1987	210	59
1994	863	230

The rate per 100 000 population of chronic liver disease and cirrhosis rose from 12.4 to 18.6 between 1981 and 1993. Male rates went from 20.3 to 25.8, while female rates increased from 7.8 to 13.9 during the same period. In 1994, 71 per cent of all murders were committed in a drunken state.



Health problems

A study carried out in one Moscow city district, one district centre and a township in Moscow Oblast examined all calls answered by emergency ambulance teams for the first quarter of 1994. Emergencies connected with alcohol use accounted for 6.8 to 7.7 per cent of all calls (not including psychotic disturbances due to alcohol abuse). Those in a state of intoxication are hospitalized twice as often as all other patients attending emergency care centres (29.5 per cent as against 14.1 per cent). The most frequent reasons given for hospitalization among cases connected with alcohol use were injuries or other accidents, which accounted for 27.8 per cent of all “alcohol” calls and for between 50 and 55 per cent of all hospital admissions in connection with alcohol use. Women made up 17.5 per cent of all patients calling in emergency assistance in connection with intoxication in Moscow Oblast and 16.7 per cent in Moscow City. Of them, 32 per cent were hospitalized.

Social problems

The percentage of crimes committed in a state of alcohol intoxication, compared with all crimes, rose from 18.2 to 34.9 between 1990 and 1994. In 1994, 68.4 per cent of all rapes, 47.2 per cent of all robberies and 62.2 per cent of all attacks were committed in a state of alcohol intoxication. The rate of motor vehicle traffic crashes involving alcohol was 45.1 per 100 000 population in 1991 and 31.6 in 1992.

Alcohol policies

Control of alcohol products

The real prices of beer and wine have been increasing, and that of spirits has been decreasing during the early 1990s. Prior to 1997, table wines were taxed not less than 31 per cent, beer (four to six per cent alcohol) was taxed not less than 26 per cent and spirits (over 35 per cent proof) were taxed not less than 37 per cent. An excise rate of 80 per cent was levied on vodka and other hard liquors with an alcohol content ranging from 28 per cent to 85 per cent. A new alcohol tax system was effected in January 1997, requiring a tax stamp on all bottles sold in the country. At the same time, the Russian Economics Ministry declared beer a non-alcoholic beverage for the purposes of taxation.

There are some restrictions on the hours of sale for alcoholic beverages. The sale of spirits which have been additionally distilled is banned, as is the sale of raw and hydrolysed and fruit-derived spirits. Drinking pure spirits is prohibited except in the far eastern regions of the Russian Federation. The sale of alcoholic beverages is forbidden within 500 metres of educational institutions and child care establishments, and on the grounds of addiction prevention/treatment institutions and industrial enterprises during working hours.

A licensing system for production and distribution currently exists alongside the traditional state monopoly. In January 1997 President Yeltsin announced plans to reinstate the state monopoly, but also noted that recently privatized distilleries and liquor stores would not be renationalized.

Since the ban on advertising of alcoholic beverages was not being effectively enforced, the President of the Russian Federation issued a decree in 1995 prohibiting advertising of alcoholic beverages and tobacco. There are provisions for any profits made by companies breaking this law to be confiscated and allocated to the Public Health budget. Advertising of alcohol is no longer shown on state-controlled television but indirect advertising continues. Labels for alcohol content are required by law. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol. The BAC limit is 0.01 g% for drivers. Conviction for a first offence of driving above the BAC limit carries a penalty of suspension of driving licence for one year, or a fine. A second offence carries a penalty of suspension of licence of one to three years or a fine. Random breath testing is carried out. There are national school-based programmes which deal with substance use.

Priorities of the early 1990s have been mass media campaigns to encourage safer drinking; encouraging lighter drinking in work settings; and using price policy to reduce demand and developing the role of the social welfare system in the prevention and management of alcohol problems.

Alcohol data collection, research and treatment

The Interdepartmental Scientific Council for Narcology plans and coordinates relevant investigations, makes suggestions for improvement in population health indices and participates in professional training. The State Centre for Research in Narcology of the Ministry of Health, the Institute for Preventive Narcology, the Department of Social and Legal Problems or Prevention of Narcological Diseases and the Department of Epidemiology are research institutes which specialize in, and have a major responsibility for research on alcohol issues.

Since 1993/1994 the practice of compulsory treatment of persons addicted to alcohol and other drugs in preventive clinics has been abolished. Decree 959 of the Russian Federation Council of Ministers and Government in 1993 provided for the establishment of rehabilitation centres, social refuges, night shelters and other public institutions for persons addicted to alcohol or other drugs.

The Russian Federation provides more than 58 000 beds in government (municipal) alcohol treatment units. The majority of these beds are in 247 clinics (43 000 beds) and the remainder are in psychiatric hospitals. In addition, there is a large nationwide network of about 2000 non-residential alcohol services based in government health service clinics. Russian alcohol treatment services are set up to treat comparatively large numbers of people. Typically a residential alcohol treatment service is located in a psychiatric hospital and has 50 to 60 beds.

Slovakia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	4 976 000	5 256 000	5 353 000
Adult (15+)	3 675 000	3 930 000	4 128 000
% Urban	51.6	56.5	58.8
% Rural	48.4	43.5	41.2

Health status

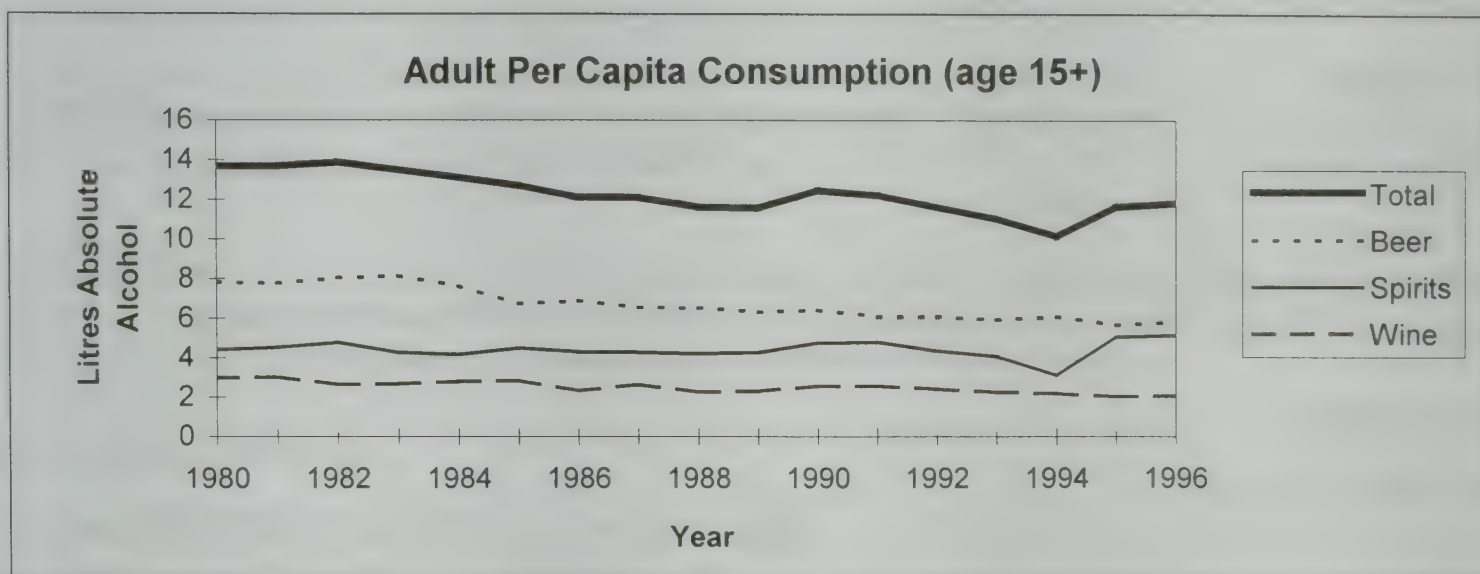
Life expectancy at birth, 1990-1995 : 66.5 (males), 75.4 (females)

Infant mortality rate in 1990-1995 : 12 per 1000 live births

Alcohol production, trade and industry

Slovakia produces beer, distilled spirits and wine. Heineken owns 66 per cent of Zlatý Bazant, Slovakia's largest brewer.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice is beer, consumption of which has fallen steadily since 1980. There is no information available on unrecorded consumption. Between 1994 and 1996, there was an increase in overall consumption driven by an increase in recorded spirits consumption.

Prevalence

There is no information available regarding the prevalence of drinking in the adult population.

Age patterns

According to a 1995/1996 survey, the percentage of secondary school students in Bratislava who had drunk alcohol during the 30 days preceding the interview increased from 60.7 to 61.8 among boys and from 59.2 to 65.1 among girls between 1995 and 1996. In a 1993 survey of primary school students aged 8, 10 and 12 years, 51 per cent, 61 per cent and 73 per cent respectively had tried wine. About 71 per cent of both age groups had tried beer.

A study of 2376 15 to 16 year olds (1262 boys and 1114 girls) was conducted in 1995. The response rate was 96 per cent (94 per cent for boys and 97 per cent for girls). Eighty-five per cent of the respondents had drunk any alcoholic beverage in the last 12 months, and 41 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 96 per cent (96 per cent for boys and 94 per cent for girls).

A 1993/1994 study of 15-year-old boys and girls found that 95.4 per cent of boys had tried alcohol, 33 per cent drank alcohol at least weekly and 46.3 per cent had been drunk at least twice. Of girls, 93 per cent had tried alcohol, 10.3 per cent drank alcohol at least weekly and 0.2 per cent had been drunk at least twice.

Economic impact of alcohol

In 1994 the estimated cost of alcohol-related health and social problems was US\$ 570 million, while the estimated cost of all alcohol programmes was US\$ 62.3 million.

Mortality, morbidity, health and social problems from alcohol use***Alcohol dependence and related disorders***

The rate of admissions to inpatient treatment for alcoholic psychosis (per 100 000 population) dropped from 50.2 to 35.4 between 1990 and 1993.

A survey between 1983 and 1987 of 12 759 inhabitants in the Slovak population and using the Michigan Alcohol Screening Test (MAST) found the drinking behaviour of 32.5 per cent of the sample problematic to some degree.

Mortality

The SDR per 100 000 population for chronic liver disease rose from 36.4 to 44.3 between 1980 and 1990, and then dropped to 37.5 in 1993.

Health problems

Between 1981 and 1989 the incidence of oesophageal cancer in males increased from 4.8 to 6.6 per 100 000 population.

Social problems

The number of alcohol-related motor vehicle crashes per 100 000 population dropped from 59.2 to 30.2 between 1990 and 1992.

Alcohol policies***Control of alcohol products***

The real prices of all three types of alcohol, i.e. beer, spirits and wine increased during the early 1990s. Table wines are taxed 40 per cent, beer (four to six per cent alcohol) is taxed 35 per cent and spirits (over 35 per cent alcohol) are taxed 55 per cent.

There are no restrictions on hours or days of sale or type or location of outlets. State owned enterprises still produce alcohol but there is no longer a state monopoly for production or distribution. In 1995 most beer production was privatized. A licence is required for the distribution of all three types of alcohol.

Restrictions on advertising of alcoholic beverages are currently implemented by means of a voluntary code operated by the alcohol and advertising industries. General and specific health warnings are not required by law, and there is no maximum legal limit for the alcohol content of beverages. Labels for alcohol content on alcohol products are required by law.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol but it is not effectively enforced. The BAC limit is 0.0 g% for drivers and is quite effectively enforced. A conviction for a subsequent offence of driving above the permitted BAC will usually result in the suspension of the driver's licence. Random alcohol breath testing is carried out infrequently. Under local and municipal regulations, drinking in public places, other than those licensed, is prohibited in parts of Bratislava City.

There are no government agencies devoted specifically to alcohol, but it is included in the work of the National Health Promotion Centre in Bratislava. The centre coordinates the implementation of national health promotion policy in conjunction with the CINDI programme and with regional agencies and nongovernmental organizations. According to the National Drug Bureau Act passed by the Government of the Slovak Republic, a National Drug Bureau was to be established in 1995.

Alcohol data collection, research and treatment

The Institute of Health Information at the National Health Promotion Centre, the Statistical Office of the Slovak Republic and the State Health Institute of the Slovak Republic in Bratislava are all involved in the collecting of alcohol consumption data.

Since 1989, five centres for Drug Addiction Treatment have been established, and nongovernmental organizations are involved in the prevention of alcohol-related problems. The State Health Institute has a network of regional institutes throughout the country, and is involved in the implementation of prevention activities. The Institute of Health Education in Bratislava carries out primary prevention

programmes in relation to alcohol and other drugs. Since 1980, there has been more emphasis on outpatient care in combination with long-term psychotherapy and aftercare treatment in the A-Club network.

Slovenia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 832 000	1 918 000	1 946 000
Adult (15+)	1 405 000	1 518 000	1 589 000
% Urban	48.0	59.0	63.5
% Rural	52.0	41.0	36.5

Health status

Life expectancy at birth, 1990-1995 : 67.7 (males), 77.6 (females)

Infant mortality rate in 1990-1995 : 8 per 1000 live births

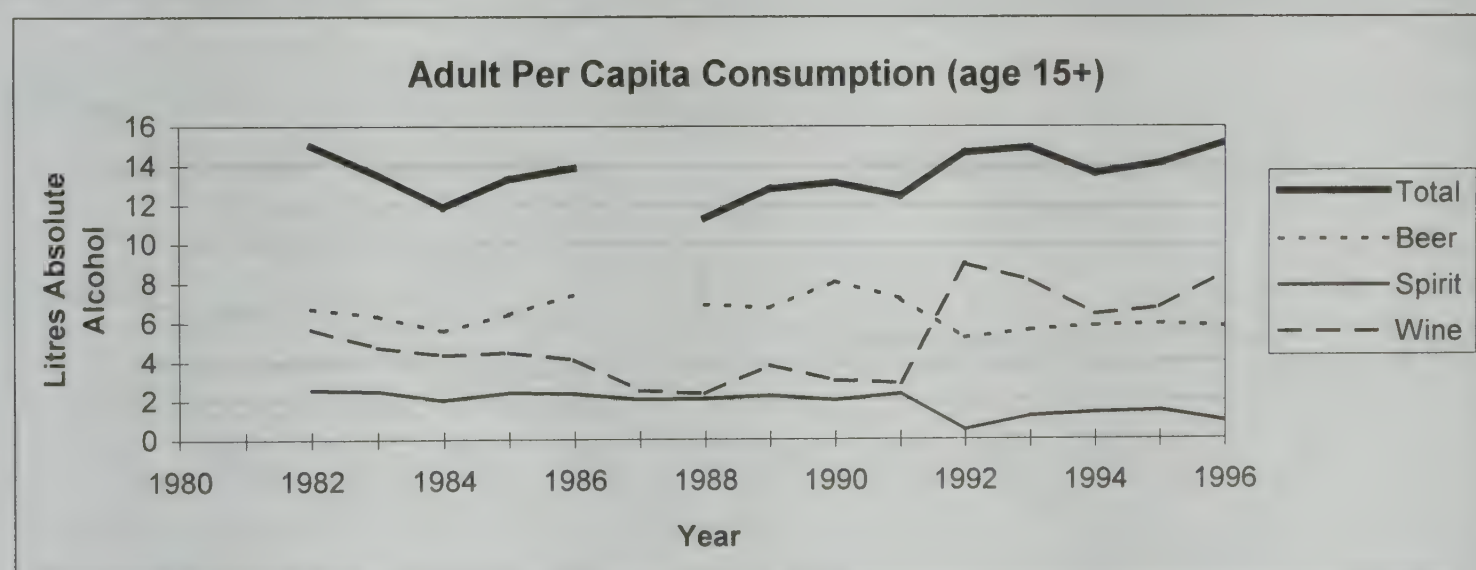
Socioeconomic situation

GNP per capita (US\$), 1995: 8200.

Alcohol production, trade and industry

Slovenia produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

In addition to the amounts charted above, unrecorded consumption of alcohol has been estimated at between seven and eight litres of pure alcohol per capita (or approximately 8.7 to 10 litres per adult).

Prevalence

In Slovenia 74 per cent of adults drink wine at least a few times a year, 42 per cent of adults think that it is wise to drink wine every day, and only 5.1 per cent object in general to the drinking of wine.

Age patterns

A study of 3306 15 to 16 year olds (1543 boys and 1763 girls) was conducted in 1995. The response rate was 92 per cent (91 per cent for boys and 92 per cent for girls). Seventy-three per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 43 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 87 per cent (88 per cent for boys and 86 per cent for girls).

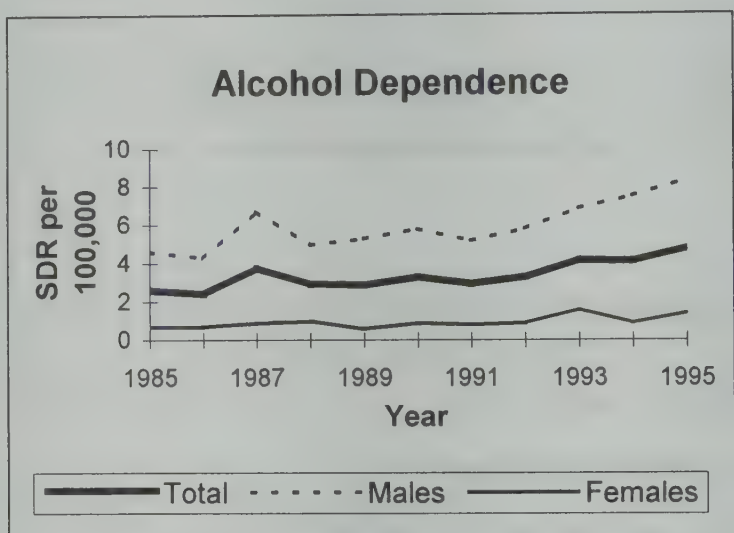
A study, published in 1994, was carried out on the drinking habits of 941 students aged 12 to 15 years in the community of Litija. The results showed that 51.3 per cent of the sample drank alcohol more than once a year, 24.6 per cent drank more than once a month, 14.6 per cent drank more than once a week, 3.5 per cent drank every day, and 6 per cent did not drink alcohol. There were no statistically significant differences in alcohol use by sex or by age.

A 1990 school survey found that 5.5 per cent of 16 year olds and 9.5 per cent of 18 year olds drink several times a week.

Mortality, morbidity, health and social problems from alcohol use

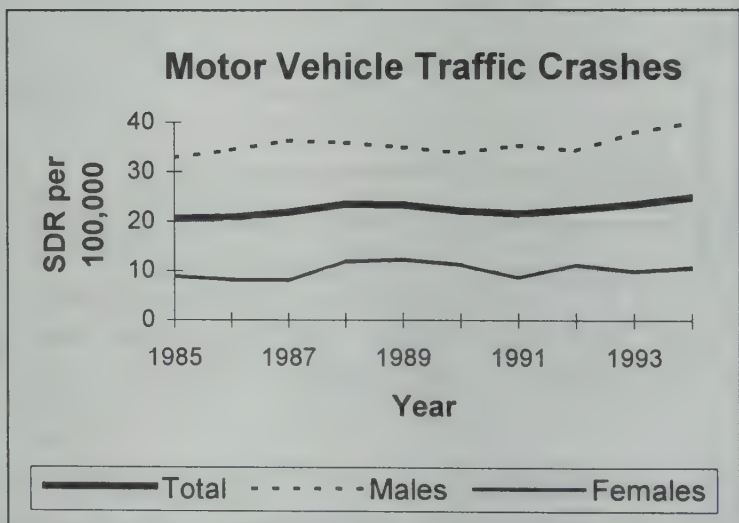
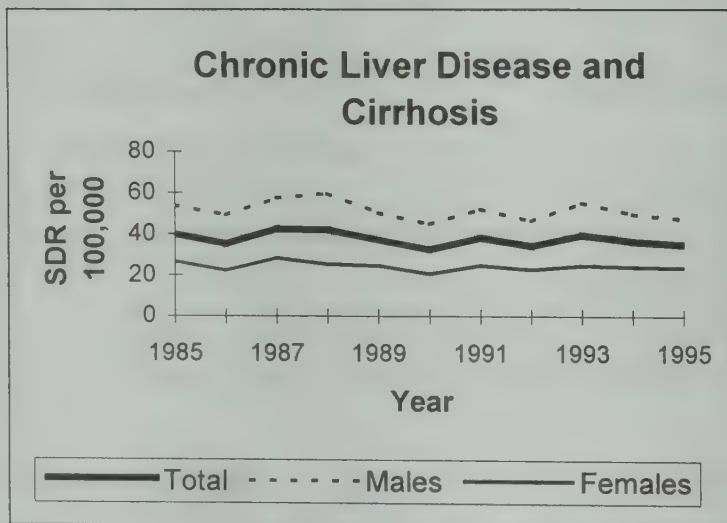
Alcohol dependence and related disorders

The SDR per 100 000 population for alcohol dependence has risen steadily particularly for males, placing the country among the highest reporting countries. The rate per 100 000 population of inpatient treatment for alcoholic psychosis dropped from 47.6 to 38.8 between 1985 and 1991, and then rose to 49.7 in 1993.



Mortality

The SDR from chronic liver disease dropped from 45.8 to 36.1 per 100 000 population between 1987 and 1994.



Social problems

The number of alcohol-related motor vehicle crashes per 100 000 population has fluctuated during the past 15 years. Between 1980 and 1984, the rate rose from 30.6 to 54.8, and then dropped to 34.1 in 1990. In 1992 the rate rose to 41.6, and then to 50 in 1993.

Alcohol policies

Control of alcohol products

The real prices of beer, wine and spirits increased in the early 1990s.

There are restrictions on hours of sale and these are fairly effectively enforced, but there are no restrictions on days of sale or on type or location of outlets. There is no state monopoly and no licence is required for the production or distribution of alcohol.

The advertising of beer, wine and spirits is quite effectively restricted on television, radio, newspapers, magazines, billboards and cinemas. Neither health warnings nor labels for alcohol content are required by law, and there is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 18 years for drinking alcoholic beverages in restaurants and bars, but this restriction is not enforced effectively. There is no legal age limit for buying alcohol in shops, grocery stores or gasoline stations. BAC limit is 0.05 g% for the general public and 0.0 g% for professional drivers. A first offence conviction of driving above the permitted BAC will usually result in the suspension of the driver's licence. Random alcohol breath testing is carried out, but infrequently. There are school-based programmes, some of which deal with alcohol only and others which deal with substance use in general. There is no national agency for the prevention of alcohol problems.

Alcohol data collection, research and treatment

The Institute of Public Health of Slovenia has been involved in drug-related activities since 1982. They employ approximately 100 people full-time. Their focus is on statistical data pertaining to epidemiology and law enforcement, as well as bibliographical data on medico-social aspects and demand reduction. The Institute of Public Health in Ljubljana collects data on patients admitted or discharged from hospitals and on first admission to the 1542 outpatient clinics. There is also a psychiatric case register which includes records of contacts of patients with alcohol disorders at the psychiatric hospitals.

The institutional treatment of alcohol problems became part of the public health system only after World War Two. Treatment is continued in clubs of abstainers and therapeutic communities. There is a tendency towards emphasising community-based approaches to treatment.

Spain

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	37 542 000	39 272 000	39 621 000
Adult (15+)	27 566 000	31 531 000	33 088 000
% Urban	72.8	75.3	76.4
% Rural	27.2	24.6	23.5

Health status

Life expectancy at birth, 1990-1995 : 74.6 (males), 80.5 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 13 580, PPP estimates of GNP per capita (current int'l \$), 1995: 14 520

Average distribution of labour force by sector, 1990-1992 : agriculture 11%; industry 33%; services 56%

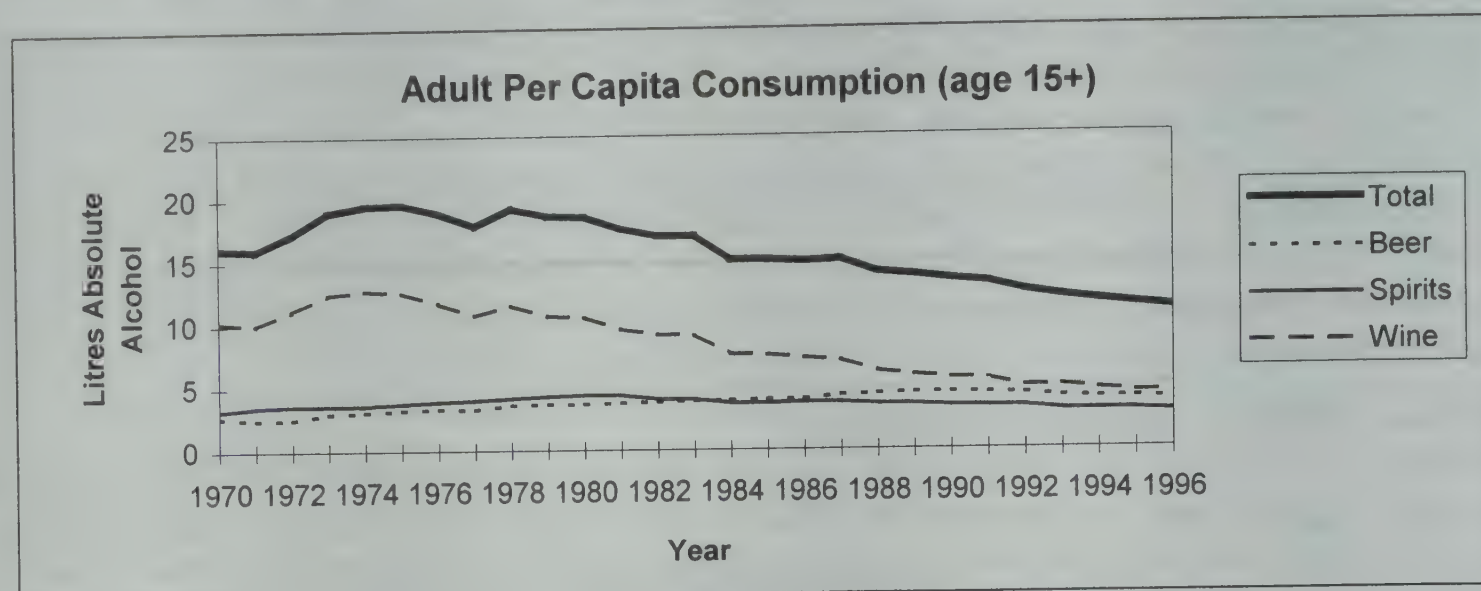
Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Spain is largely a wine-drinking country. Freixenet is a leading winery with market ventures in Great Britain, Germany and the US, among others. In 1994, there was a huge oversupply of wine, prompting the European Union to consider legislating a curb on wine production. The Spanish beer market is expected to grow about two per cent a year. Sociedad Ansnima Damm brews and packages Budweiser for the Spanish market. In 1993 Coors Brewing Company purchased El Aguila SA, a

Spanish brewery with a capacity of 500 000 barrels. A 1995 study revealed that Spain had more liquor outlets per capita than any other western European country.

Alcohol consumption and prevalence



Consumption

Although spirits consumption has dropped slightly and beer has risen slightly, Spain is primarily a wine-drinking country, and the decline in wine consumption has fuelled a decrease in overall adult per capita consumption of absolute alcohol since its high point in 1975.

Prevalence

A national survey found that in 1993, two per cent of adults were high consumers (drinking between 415 and 553 grams of pure alcohol per week), and two per cent were classified as excessive consumers of alcoholic beverages (drinking more than 553 grams of pure alcohol per week), a decrease from three per cent in 1980. A 1990 survey found that 32 per cent of persons aged 15 years and over drank at least three or four days a week, while 44 per cent drank less than weekly or never. A representative nationwide sample of 2495 adults aged 18 years and over, was selected by a multi-staged random strategy during 1989. Total lifetime prevalence was 55.7 per cent (70.1 per cent for men and 42.6 per cent for women). The average age of first use was 16.7 (16.1 for men and 17.8 for women).

Patterns of drinking vary considerably from one part of the country to another. Population sample surveys in Cantabria and Seville showed that in Cantabria (population of about half a million), a serious problem of excessive drinking (defined as greater than 100 ml of pure alcohol a day on average) was found among men between the ages of 16 and 65. Prevalence of excessive drinking among women was very low. In rural areas, about twice as many men of the above age group were found to be excessive drinkers as in urban areas. In Seville, two-thirds of men and one-third of women reported drinking daily or nearly every day.

Age patterns

An EC survey in 1990 found that 3 per cent of boys and 1 per cent of girls aged 11 or 12, and 22 per cent of boys and 17 per cent of girls aged 13 to 15 drank alcohol weekly. A WHO study of schoolchildren in 1993/1994 found that more than 90 per cent of 15 year old boys and girls drank alcohol at least once a week, and that 22.8 per cent of boys and 19.1 per cent of girls had been drunk at least once.

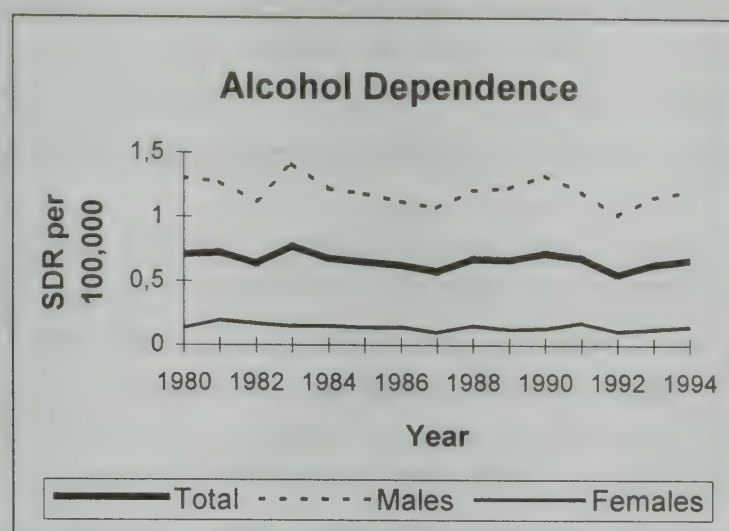
Economic impact of alcohol

In 1984 the health costs of alcohol totalled 15 017 million pesetas (US\$ 99.3 million), up from 13 145 million pesetas (US\$ 86.9 million) in 1981. Between 1970 and 1992 the total expenditure on alcoholic beverages as a percentage of private consumption expenditure dropped from 1.7 to 1.3.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate of discharges per 100 000 population for alcohol dependence syndrome fell from 36 to 19 between 1980 and 1992.

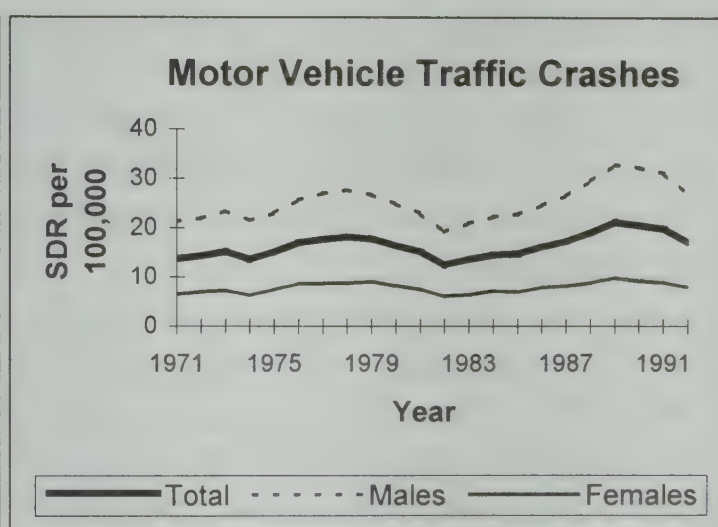
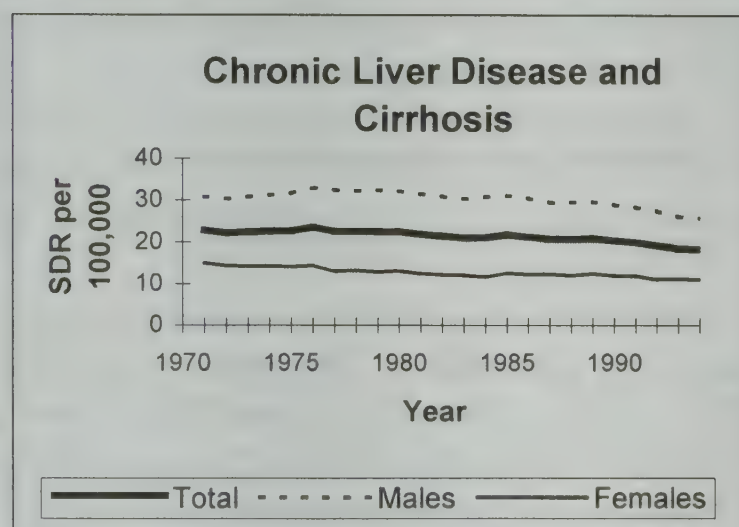


Mortality

The SDR per 100 000 population for chronic liver disease fell from 24.2 in 1980 to 18.7 in 1991, while the rates for alcohol-related burns, falls, drowning and poisoning rose from 42.9 to 44.4 over the same period.

Health problems

The total number of reported alcohol-related admissions to all hospitals fell from 15 990 in 1978 to 13 267 in 1984.



Social Problems

Alcohol-related motor vehicle crashes per 100 000 population rose from 6.9 in 1985 to 10.6 in 1992.

Alcohol policies

Control of alcohol products

The real prices of all three types of alcohol, i.e. beer, spirits and wine increased between 1990 and 1995. In 1994, taxation rates were: 13 per cent on table wines, 18.4 per cent on beer and 43.4 per cent on spirits.

There are restrictions on hours of sale, but there are no restrictions on days of sale, or on type or location of outlets. A licence is required for the production and distribution of beer, wine and spirits.

Advertising of alcoholic beverages in schools, sport centres and health care institutions is prohibited. The General Advertising Law prohibits the advertising of alcoholic beverages with an alcohol content greater than 20 per cent on television and radio. Advertising of other alcoholic beverages on television and radio is permitted only after 21:30 hours. A voluntary code governs the content of advertisements in newspapers/magazines and on billboards. In general, private media employ a more liberal policy than public media.

General or specific health warnings on alcohol containers are not required, although a label is required to display the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcohol in most regions of Spain, otherwise the age limit is 18. The BAC limit is 0.08 g% for car drivers, 0.05 g% for drivers of vehicles of more than of 3500 kg and 0.03 g% for public service drivers and drivers of dangerous merchandise, emergency service vehicles, schoolchildren and minors, and special service vehicles. On conviction for a first offence, suspension of driving licence is usual, and random alcohol breath testing is frequently carried out.

There is no national agency devoted specifically to prevention of alcohol-related problems but it is included in the work of the Section on Epidemiology, Health Promotion and Health Education in the Directorate General of Public Health within the Ministry of Health and Consumer Affairs (MHCA). The MHCA has organized intersectoral meetings between various ministries, autonomous communities, professionals, organizations and volunteers, etc. in order to reconcile the diverse legislation on alcohol and coordinate the intervention policies on supply and demand.

There are mass media and school-based programmes at a national level which deal with substance use in general. The number of alcohol-related initiatives directed at young people is increasing at national, regional and local levels.

Alcohol data collection, research and treatment

New programmes in the study of alcohol abuse have been established in the Basque country to provide training for future members of teams who will work with alcohol and drug abusers.

The most widespread system of specialized treatment is organized on an outpatient basis through 70 dedicated dispensaries or mental health centres for alcoholic and drug-dependent people. Some outpatient consultations have been established in mental hospitals. The social security system provides treatment for alcoholics through about 500 neuropsychiatric consultations in the medically specialized outpatient departments or in "zone consultations", which are held for two hours a day, on referral by a general practitioner. There are a few specialized inpatient services for alcoholics in university general hospitals, but most inpatient care occurs in mental hospitals where between four and five per cent of beds are occupied by alcohol dependent patients who also constitute 25 per cent of psychiatric admissions.

An important role in treatment and rehabilitation is played by the self-help organizations, such as Alcoholics Anonymous (20 units available working in 15 autonomous communities in 1996) and rehabilitated ex-alcohol dependent persons associations. Some attention is paid to the families of excessive drinkers through certain outpatient alcoholism services, the social services and voluntary organizations, but these problems do not appear to have received priority attention.

Sweden

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	8 310 000	8 559 000	8 780 000
Adult (15+)	6 682 000	7 024 000	7 113 000
% Urban	83.1	83.1	83.1
% Rural	16.9	16.9	16.9

Health status

Life expectancy at birth, 1990-1995 : 75.4 (males), 81.1 (females)

Infant mortality rate in 1990-1995 : 5 per 1000 live births

Socioeconomic situation

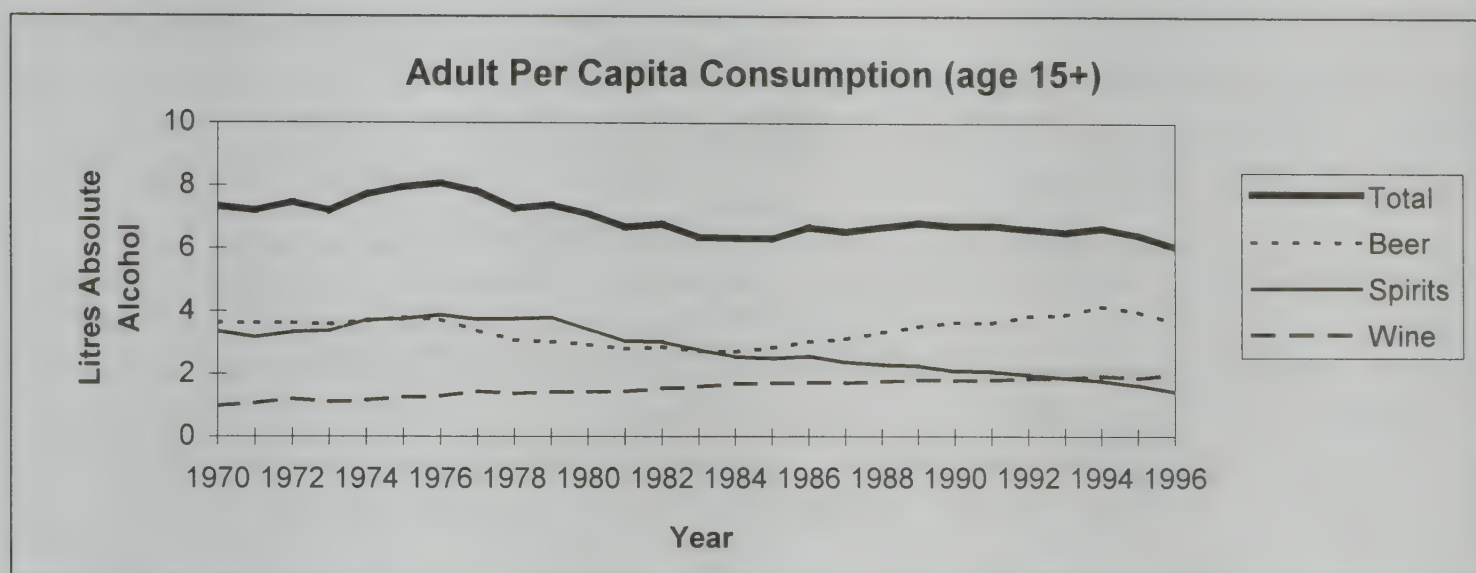
GNP per capita (US\$), 1995: 23 750, PPP estimates of GNP per capita (current int'l \$), 1995: 18 540
Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 28%; services 69%

Adult literacy rate (per cent), 1992 : 95

Alcohol production, trade and industry

Despite joining the European Union, the state production monopoly on wine and spirits production has not been privatized, nor have new wine or spirits production companies been established. Nine import licences were issued to private firms. The nine licensees are unable to sell alcohol at the retail level, instead, they have the right to sell alcohol to the state-run Systembolaget stores. The leading brewer, Pripps, is owned by the Norwegian food and drink conglomerate Orkla. Domestic and imported marketers of beer spent US\$ 12 million marketing brands in Sweden in 1993. Imports continue to dominate Sweden's wine consumption, although since 1986 the contribution of domestic producers has been substantial.

Alcohol consumption and prevalence



Consumption

Unrecorded consumption was estimated at 1.8 litres of pure alcohol per capita in 1991. This would make total adult per capita consumption in 1991 approximately 8.5 litres of absolute alcohol. Reduction in total recorded consumption has been fuelled by reductions in recorded spirit consumption. However, much of the decrease has been offset by increases in beer and wine consumption.

Prevalence

A consumer survey in 1990 found that one per cent of adults were drinking almost every day, 23 per cent were drinking once or twice a week, 27 per cent were drinking twice a month, 36 per cent were drinking once a month or less often, and 14 per cent were abstainers.

Age patterns

A study of 3472 15 to 16 year olds (1746 boys and 1725 girls) was conducted in 1995. The response rate was 86 per cent (84 per cent for boys and 87 per cent for girls). Eighty-two per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 63 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 89 per cent for both boys and girls.

A 1993/1994 survey of fifteen year olds showed that 94 per cent had tried alcoholic beverages. Nineteen per cent of boys and 11.3 per cent of girls drank weekly, and 27.4 per cent of boys and 22.4 per cent of girls had been drunk at least twice.

Economic impact of alcohol

The cost of lost output because of alcohol during the 1980's is estimated at Skr 5 000 million annually. The Medical Advisory Committee at the Ministry of Health and Social Welfare reports alcohol as one of the major causes of production losses, illness and premature death, and of high costs of social and medical resources.

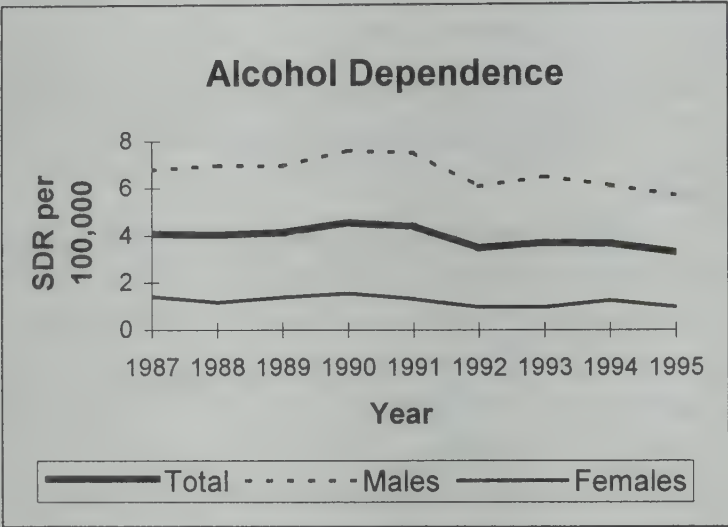
In 1992 Sweden spent SEK 29 million (US\$ 3.6 million) on alcohol, equivalent to 3.7 per cent of private consumer expenditure. Over 60 per cent of this went as income to the State.

In the 1980s approximately six out of 1000 employed people were engaged in the production or trade of alcoholic beverages.

Mortality, morbidity, health and social problems from alcohol use

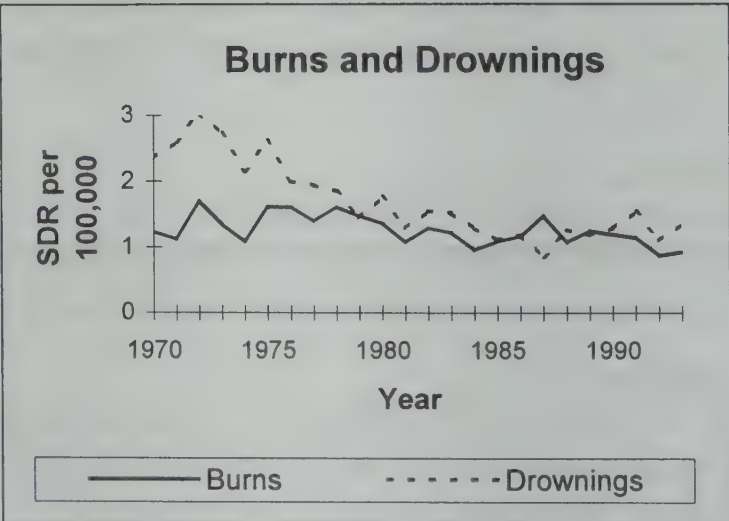
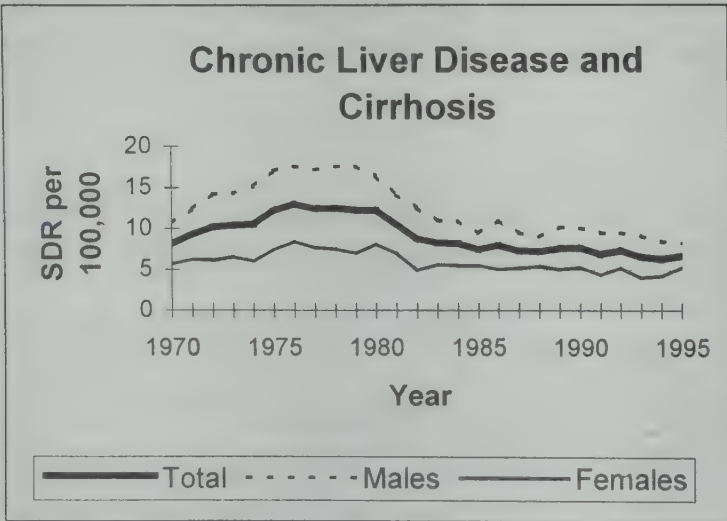
Alcohol dependence and related disorders

Hovering between 3 and 4 per 100 000 population, Sweden's SDR from alcohol dependence is relatively high by global standards. The rate per 100 000 population of reported alcohol-related admissions to psychiatric hospitals increased by more than six times between 1960 and 1990, rising from 83 to 562.



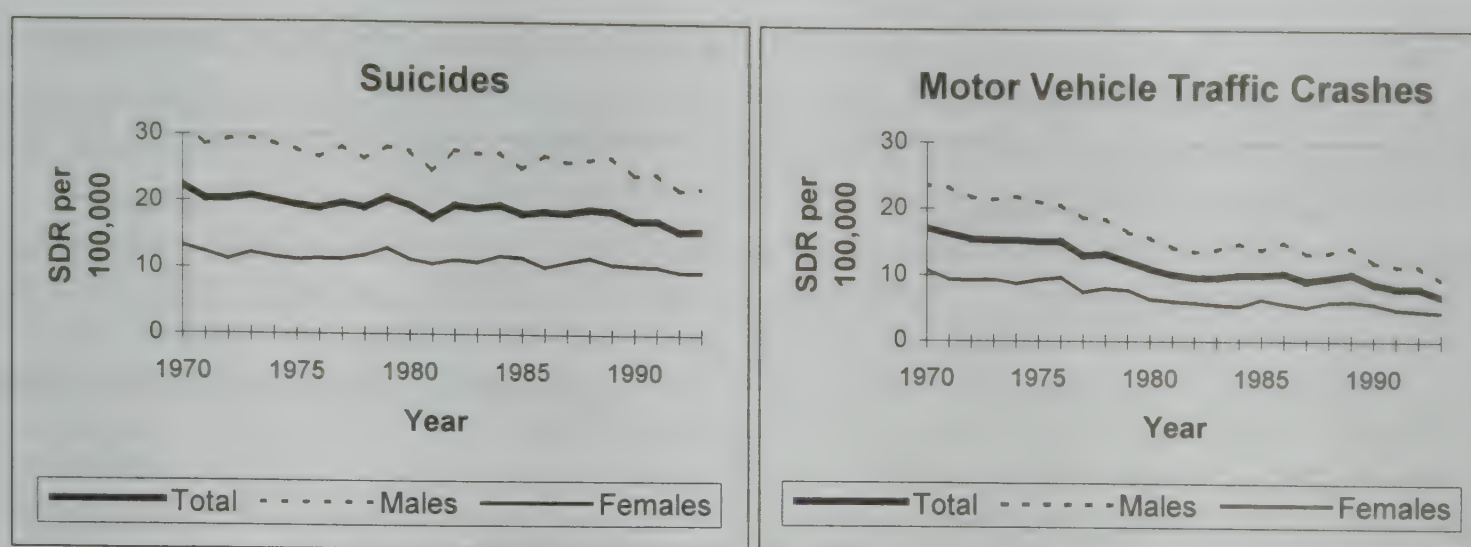
Mortality

The SDR per 100 000 population for alcohol-related burns, falls, drowning and poisonings fell from 62.7 to 44.2 between 1980 and 1992. Chronic liver disease rates fell from 11.2 to 6.4 during the same time period.



Morbidity

A 1992 study of psychiatric patients showed that 87 per cent of the attempted suicides were performed after drinking, and 86 per cent of total violent episodes took place when the assailant was drunk.



Social problems

The number of road traffic crashes involving alcohol per 100 000 inhabitants was 12 in 1992, similar to the 12.5 recorded in 1985 and a decrease from the 15.4 recorded in 1990. The number of drunken drivers detected decreased from 24 563 in 1992 to 24 298 in 1993.

Alcohol policies

Control of alcohol products

The real price of beer increased in the 1985-1990 period but has been decreasing since 1990. The real prices of wine and spirits have been decreasing since 1987. The 1994 taxation rates were: 59 per cent on table wines, 55 per cent on strong beer (alcohol content greater than 3.5 per cent), and 84 per cent on spirits.

The state has a monopoly on the retail sale of wine, spirits and strong beer. All the stores are closed on Saturdays and Sundays and outlets are not allowed in areas where they could be perceived as contributing to social problems. They are also prohibited in the immediate neighbourhood of schools. One or more state monopoly stores (Systembolaget) exist in most municipalities of Sweden. Strong beer may only be purchased in Systembolaget stores. Sale of beer with a medium alcohol content (between 2.5 and 3.5 per cent alcohol) is permitted in ordinary grocery stores. The state monopoly on import, export, wholesale and production of spirits was abolished on 1 January 1995, following Sweden's accession to the EU. Private interests are now permitted to act in these sectors of the alcohol market, but licences, issued by a new governmental board (the Alcohol Inspection Authority) are required.

General and specific health warnings on alcohol containers are not required by law. The advertising of beer, wine and spirits is banned, although the advertising of low-alcohol beer (less than 2.5 per cent alcohol) is allowed, and advertising is permitted in trade magazines. In some municipalities local regulations prohibit alcohol consumption in public places such as parks and streets. Labels for alcohol content are required by law, but there is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol in restaurants, and an age limit of 20 years for buying alcohol in liquor stores. There is a legal age limit of 18 for buying medium strength beer sold in ordinary grocery stores. The BAC limit is 0.02 g% for drivers and this restriction is quite effectively enforced. First offence conviction for driving above the BAC limit usually results in suspension of driving licence. Imprisonment is often, but not always, used on conviction for a second or subsequent offence of driving above a BAC of 0.10 g%. General and specific health warnings on alcohol containers are not required by law. There are local school-based and workplace alcohol education programmes.

The retail monopoly offers point-of-purchase information on alcohol-related harm and on the risks related to the use of alcohol in situations such as pregnancy, adolescence and driving. In many counties, representatives of the county council, the county municipalities, police, schools and nongovernmental offices collaborate for the prevention of alcohol problems.

At the national level, priorities of the 1990s have been reducing availability; mass media campaigns to encourage safer drinking; encouraging lighter drinking in work settings; increasing the role of

primary health care teams in the prevention and early detection of alcohol problems; using price policy to reduce demand; developing the roles of the social welfare system and the criminal justice system in the prevention and management of alcohol problems; developing specialized treatment for alcohol dependence and other alcohol problems; and addressing particular alcohol problems.

The high price of alcohol has been considered to be probably the single most effective element of the Sweden's national alcohol policy. Membership in the EU effective January 1995, with higher permitted levels of import of alcoholic beverages and abolition of State monopolies (except for retailing) is expected to require greater effort to influence the demand for alcohol. The main objective of an explicitly formulated national policy, as stated by Parliament in 1985, was to reduce alcohol consumption by 25 per cent by the year 2000. The National Institute of Public Health has been given the leadership role at national level for the prevention of alcohol problems and had a mandate to form a National Executive Group for Prevention of Alcohol and Drug-Related Problems. In June 1995 this group presented a National Action Plan to the Government. The General Directors of various National Boards and organizations (National Board of Health and Welfare, National Alcohol Inspection Board, National Police Board, central organizations for the county councils and the municipalities, Customs Departments, etc.) are represented in the executive group. There are local school-based and workplace alcohol education programmes.

Alcohol data collection, research and treatment

The National Institute of Public Health, Systembolaget and various university departments sponsor both alcohol research and data collection of various kinds. In 1987 there were 250 institutions for alcohol and drug abusers with 4200 beds, and 1700 beds in boarding homes/half-way homes. Sweden's temperance movement, supported by the nation's most successful lottery, sponsors alcohol education and treatment programmes throughout the country.

The goals of the social services laid down in Section 1 of the Social Services Act constitute guidelines for all treatment designed to help individuals to discontinue the abuse of alcohol, and other drugs. These goals are that care must be based on respect for the self-determination and privacy of the individual and must as far as possible be designed and conducted in partnership with the individual abuser. Care within the framework of social services must be provided in agreement with the abuser in accordance with the provisions of the Act. However, care must be provided for an abuser regardless of his or her consent, subject to the conditions stated in the Act (compulsory care). Compulsory care is provided through residential institutions run by county councils or municipalities. Hospital care is mandated to be provided for those who require it.

Switzerland

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 319 000	6 834 000	7 202 000
Adult (15+)	5 072 000	5 680 000	5 929 000
% Urban	57.0	59.5	60.8
% Rural	43.0	40.5	39.2

Health status

Life expectancy at birth, 1990-1995 : 74.7 (males), 81.2 (females)

Infant mortality rate in 1990-1995 : 6 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 40 630, PPP estimates of GNP per capita (current int'l \$), 1995: 25 860
Average distribution of labour force by sector, 1990-1992 : agriculture 6%; industry 34%; services 60%.

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Switzerland produces beer, distilled spirits and wine. Two large brewers produce two-thirds of the nation's beer, and the number of brewers has fallen by half since 1970 to 28, employing 3250 people. Wine production is largely a craft activity, with 33 003 registered vintners, and only 941 of these cultivating more than three hectares. Spirits production also occurs widely on a very small scale, with 170 000 producers, approximately 700 of which do so professionally.

Alcohol consumption and prevalence

Consumption

In 1985 unrecorded consumption of alcohol was estimated at about five per cent of recorded consumption. No estimate of unrecorded consumption is available in the late 1990s. If unrecorded consumption had stayed at this level, total adult consumption for 1995 would have been 11.8 litres of absolute alcohol.

Prevalence

The Swiss Institute for Prevention of Alcoholism and Other Drug Problems (ISPA) carried out four surveys on representative samples of the population aged 15 to 74 years, in 1975, 1981, 1987 and 1992. The 1992 survey found that, in the category of "consuming alcohol one or several times daily", the highest percentage was among those in the 45 to 54 year age group (32 per cent). Only 5 per cent of those in the 15 to 24 year age group consumed alcohol one or several times daily, and the rest of the age groups ranged from 15 per cent to 24 per cent. Thirty per cent of those in the 25 to 34 year age group consumed alcohol between one and two times a week, while the percentage of those who "seldom" consumed alcohol ranged from 25 per cent to 34 per cent among all age groups. About 25 per cent of 15 to 24 year olds reported never drinking alcohol, compared with 8 per cent of 45 to 54 year olds. The most frequent and highest consumption occurred among the Italian Swiss, followed by the French Swiss and, lastly, the German Swiss.

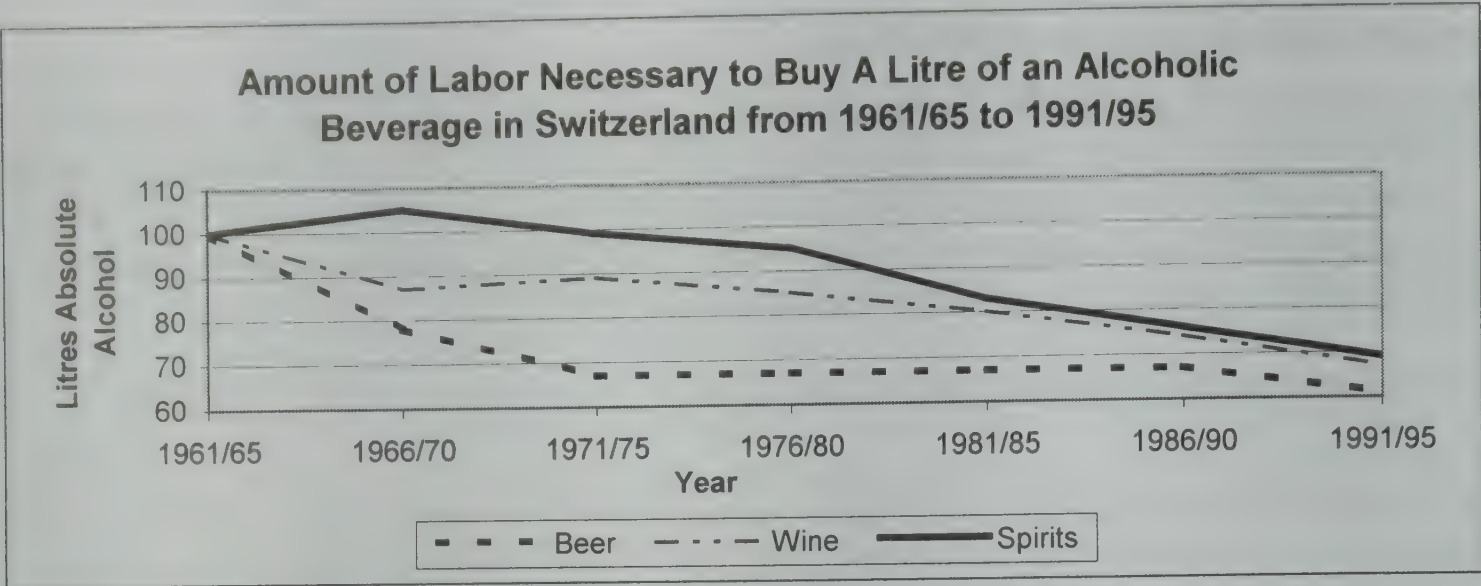
Age patterns

Surveys of young people in 1994 showed that 60 per cent of those between the ages of 11 and 12 and 90 per cent of those between 15 and 16 had had some experience of alcohol. About 25 per cent of 10 year old boys and more than 40 per cent of 15 to 19 year old boys were drinking alcohol at least weekly. Seven per cent of 10 year old girls and 25 per cent of girls aged 15 to 19 years drank at least weekly. Five per cent of boys aged 15 to 19 reported having at least one drink per day.

Economic impact of alcohol

In 1972 it was estimated that alcohol consumption cost the Swiss economy Sfr 1 300 000 (US\$ 862 500 000). The extrapolation for 1975 was Sfr 1 500 000 000 (US\$ 995 190 000) and Sfr 2 000 000 000 (US\$1 326 900 000) for 1987. Ten per cent of the profits made by the Alcohol Board on distilled beverages is allocated for prevention (three per cent) and treatment (seven per cent) of problems relating to use of alcohol, drugs and medicaments. In the fiscal year 1993/1994 this amounted to Sfr 18 million (US\$ 12 million).

Industries concerned with alcoholic beverages employed 5494 people in 1985 - about 0.6 per cent of industrial employees. That same year, purely viticultural enterprises employed 4256 people full-time - about five per cent of agricultural employees - as well as 27 913 occasional workers. In the fiscal year 1993/1994, Sfr 18.8 million were distributed to cantons from excise on distilled spirits for prevention and treatment of alcohol problems, drug problems and abuse of medicaments.



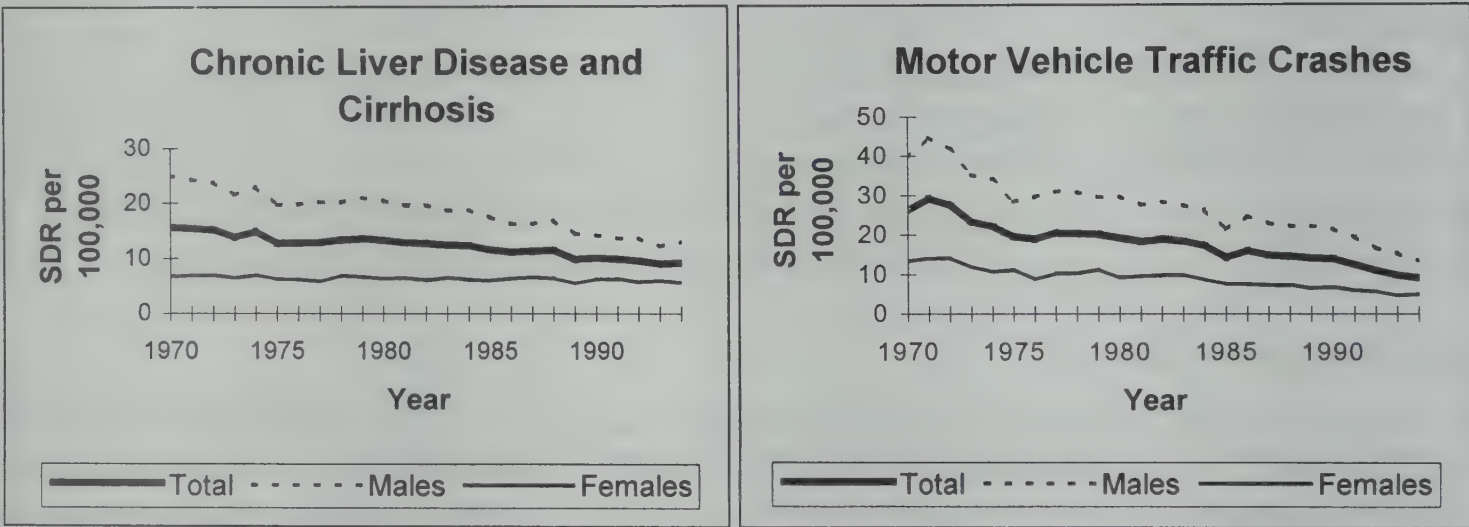
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

There are no data available for at the last 10 years on the treatment of alcoholic psychosis, but a comprehensive report is in preparation. The number of alcohol dependent persons is estimated to be about 150 000. Among male hospital patients of working age, those with a primary or secondary diagnosis of alcohol dependence constitute the largest group (8 to 13 per cent of those between 30 and 59 years of age). At the end of 1983, specialized and medico-social services for alcohol dependence had more than 20 000 alcohol dependent patients on their books. The ratio of newly admitted patients was twelve men to one woman in the 1950s, but four to one in 1987.

Mortality

The SDR per 100 000 population for chronic liver disease dropped from 12.6 to 8.3 between 1980 and 1993.



Social problems

The number of road traffic crashes involving alcohol per 100 000 inhabitants was 40.2 in 1992 compared to 43.8 in 1985 and 34.2 in 1991. Alcohol-related traffic crashes constitute approximately 10 per cent of the total number of traffic crashes. Alcohol-related injuries, as a percentage of total motor vehicle crashes, rose from 6.2 per cent in the period from 1963 to 1965 to 12.2 per cent in the period from 1981 to 1985. Between 1963 and 1981, 30 to 49 per cent of sentences for road offences were for drunkenness. This rate rose to above 50 per cent in the period from 1983 to 1985. Over these years, more than 40 per cent of all withdrawals of driving licences were for drunk driving.

Alcohol policies

Control of alcohol products

The real prices of beer and spirits have been decreasing during the last five years while the real price of wine has been stable. Table wines are taxed five per cent. The tax on beer is fixed by the Constitution at 18 per cent of the price of draft lager beer. Different rates apply to spirits depending on the type.

The Constitution states that "Legislation should reduce the consumption of potable spirits and, accordingly, their importation and production..." and that trade in alcoholic beverages and the cantonal licensing laws must take public health needs into account. The cantons are largely responsible for controlling the sale of alcoholic beverages, and they collaborate with the confederation on the implementation of the Federal law on wholesale and retail trade beyond the cantonal borders. There is a state monopoly for the production of spirits, but not of wine, beer and cider made by fermentation.

The Federal Government, while having the exclusive right to produce spirits, in practice grants licences to third parties. The monopoly grants concessions for the importation of spirits, and it buys up home-made spirits legally distilled from fruit with pips to reduce consumption after abundant harvests. No spirits may be produced from potatoes, grain or molasses. A licence is required for the distribution of distilled beverages, beer and wine. There are strict controls to ensure that spirit alcohol designated for industrial use is not diverted for use in beverages. Farmers are permitted to distil tax free for their own use. The Swiss Alcohol Board has tried to decrease the number of such distillers by purchasing their stills. However, about 72 000 tax-exempt producers remained in the early 1990s, and their production amounted to nearly one third of the whole production. Whereas spirits production is controlled, wine production is encouraged and receives subsidies and protection from imports.

General and specific health warnings are not required by law. Labels for alcohol content are required by law on distilled beverages only. There is a maximum legal limit of 55 per cent by volume for the alcohol content of spirits. In two-thirds of the cantons, a regulation requires on-premises establishments to offer a choice of non-alcoholic beverages at a price no higher than the least expensive alcoholic beverage. There is no legislation to create or support environments free from alcohol.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying fermented beverages and an age limit of 18 years for buying distilled beverages. Since the mid-1980s the Federal Law prohibits advertising of spirits in or on places for public usage, sporting fields and events, events for young people and price lists, etc. The BAC limit is 0.08 g% for drivers. Random alcohol breath testing is not carried out. Penalties for driving above the permitted limit vary from canton to canton.

Priorities of the early 1990s have been: mass media campaigns to encourage safer drinking; using price policy to reduce demand; developing the role of the criminal justice system in the prevention and management of alcohol problems; and addressing particular alcohol problems. A section on alcohol and tobacco matters of the Division of Health Promotion in the Federal Office of Public Health advises the Ministry and Government on policies and programmes. It deals mainly with educational measures, while the Federal Alcohol Board deals (for distilled spirits) with political measures. National school-based programmes focusing on alcohol and tobacco are provided.

ISPA is a private body subsidised by the State, which collaborates with the above bodies in promoting national priorities on the prevention of alcohol problems.

Alcohol data collection, research and treatment

Institutes such as ISPA in Lausanne and various university institutes specialize in research on alcohol issues. The Swiss Research Foundation on Alcohol was appointed by the Federal Commission to encourage and coordinate alcohol research related to public health. The ISPA initiated a reporting system and data bank at the end of 1987. Data on inpatient and outpatient treatment were collected only until 1981. Data from German-speaking Switzerland have been collected since 1984, and discussions are under way to include institutions in French-speaking Switzerland as well.

Considered part of health care, treatment of alcohol problems comes under the jurisdiction of the cantons. The involvement of general practitioners is tending to increase. The most widespread type of

institutional treatment is given in outpatient centres, run by persons with professional training. There are about 300 such counselling centres, some also involved with drug dependence. Further outpatient care is provided by social services, psychiatrists, volunteer groups and Alcoholics Anonymous. Inpatient care is provided mainly by mental hospitals, but also by general hospitals and specialized institutions, generally under medical and psychiatric management.

Tajikistan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 954 000	5 287 000	6 101 000
Adult (15+)	2 258 000	3 006 000	3 472 000
% Urban	34.3	32.2	32.2
% Rural	65.7	67.8	67.8

Health status

Life expectancy at birth, 1990-1995 : 67.3 (males), 73.0 (females)

Infant mortality rate in 1990-1995 : 48 per 1000 live births

Socioeconomic situation

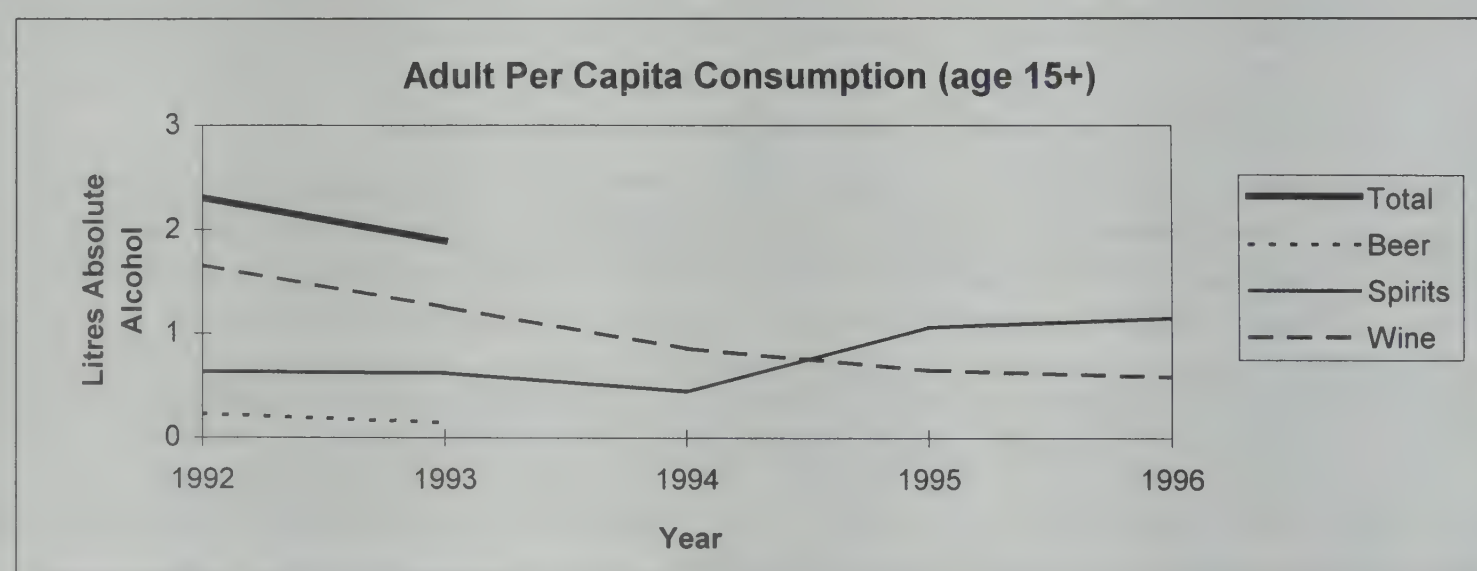
GNP per capita (US\$), 1995: 340, PPP estimates of GNP per capita (current int'l \$), 1995: 920

Average distribution of labour force by sector, 1990-1992 : agriculture 14%; industry 19%; services 67%

Alcohol production, trade and industry

Tajikistan reports production of beer and wine.

Alcohol consumption and prevalence



Consumption

In 1993, the last year for which beer production figures are available, total adult consumption of pure alcohol was 1.75 litres.

Economic impact of alcohol

Consumer expenditure on alcoholic beverages, as a percentage of general expenditure on purchase of goods and payments for services, was 1.8 in 1990, rising to 2.2 in 1993.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of patients (per 100 000 population) with alcoholic dependence registered at hospitals and other treatment centres during 1990 was 1.7, and 1.2 in 1991.

Social problems

The number of persons committing crimes under the influence of alcohol (thousands) decreased from 1.1 to 0.7 between 1990 and 1994.

The Former Yugoslav Republic of Macedonia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	2 046 000	2 163 000
Adult (15+)	N/A	1 506 000	1 635 000
% Urban	N/A	57.8	59.9
% Rural	N/A	42.2	40.1

Health status

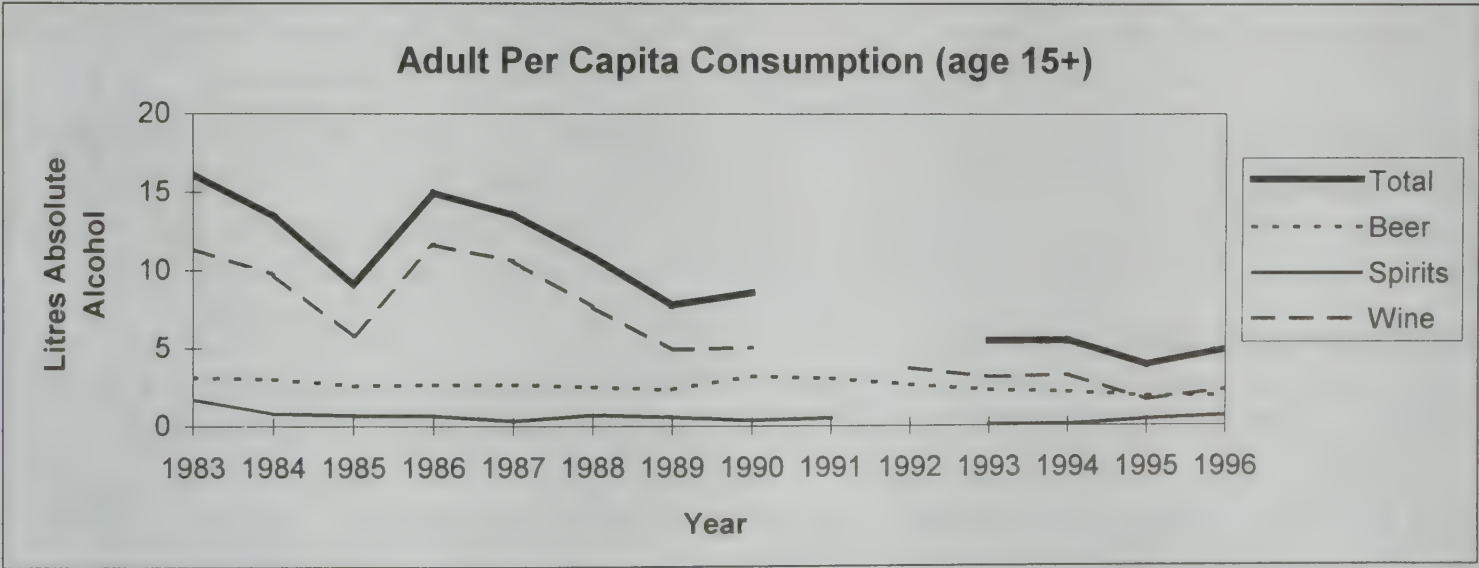
Life expectancy at birth, 1990-1995 : 68.8 (males), 75.0 (females)

Infant mortality rate in 1990-1995 : 27 per 1000 live births

Alcohol production, trade and industry

The former Yugoslav Republic of Macedonia produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



Consumption

Wine was the alcoholic beverage of choice for recorded consumption until very recently, when it fell to the level of beer consumption. It was estimated in 1992 that about 50 per cent of total production was home-made and that unrecorded per capita consumption was about four litres of pure alcohol. This would put total adult per capita consumption at around 10 litres of pure alcohol. A 1994 survey of second level school children found that 83 per cent of families were involved in the production of alcohol at home.

Prevalence

Surveys carried out in the early 1990s showed that 15 per cent of males were heavy drinkers (no definition).

Age patterns

Surveys in second level schools in Skopje, Bitola, Kavadarci and other towns in 1994 found that 54 per cent of adolescents between the ages of 14 and 18 used alcoholic beverages periodically, while a 1993 survey indicated that most Macedonians have their first contact with alcohol at the age of seven.

Mortality, morbidity, health and social problems from alcohol use*Alcohol dependence and related disorders*

Surveys in the early 1990s estimated that approximately two per cent of the population was dependent on alcohol. Surveys in Skopje during the early 1980s found that approximately 12 000 people were dependent on alcohol, with a male-female ratio of 1:14. The rate per 100 000 population of admission to inpatient treatment centres for alcoholic psychosis rose from 10.2 to 14.3 between 1985 and 1990, and then dropped to 12.1 in 1993. Between 1980 and the early 1990s, the number of inpatients under treatment for alcohol dependence increased by 5 to 10 per cent and the number of outpatients by 50 per cent.

Mortality

The autopsy reports of 3138 patients who died in the Institute for Lung Diseases and Tuberculosis, Sremska Kamenica, between 1981 and 1990 were examined. Of these, 50 patients, ranging in age from 19 to 72 (median age 51), died as a result of tuberculosis. Of these 42 per cent were alcohol abusers.

Alcohol policies*Control of alcohol products*

The real prices of beer, spirits and wine have been increasing during the early 1990s. Table wines are taxed 18 per cent, beer (four to six per cent alcohol) is taxed 60 per cent and spirits (over 35 per cent alcohol) are taxed 90 per cent.

There are restrictions on hours of sale and on location of outlets and these are enforced quite effectively. There are no restrictions on days of sale or types of outlets. Under laws passed in 1993-1994, the sale of alcoholic beverages to minors is prohibited and the sale of alcoholic beverages is prohibited in close proximity to schools and workplaces. There is a state monopoly for the production and distribution of all the three types of alcoholic beverages i.e. beer, spirits and wine, and part of the monopoly's profits are allocated for the prevention of alcohol-related problems.

There are restrictions on the advertising of wine and spirits, but none on the advertising of beer. General or specific health warnings are not required by law, and there is no legal requirement for labels carrying alcohol content. The maximum legal limit for the alcohol content of beverages is 50 per cent.

Control of alcohol problems

There is a minimum legal age limit of 16 years for buying alcoholic beverages and it is effectively enforced. The BAC limit is 0.05 g% for the general public and 0.0 g% for professional drivers and these limits are fairly effectively enforced. A conviction for a first offence of driving above the permitted BAC will usually result in the suspension of the driver's licence. Random alcohol breath testing is carried out, but infrequently. There are mass media, school-based and workplace programmes at the national level dealing with substance use in general. The Republican Association organizes lectures and seminars for parents, teachers and other concerned persons. There is also a City Association for Prevention of Problems related to Alcohol, Drugs and Tobacco, which engages in similar work at a more local level.

Alcohol data collection, research and treatment

There is no agency devoted specifically to the prevention of alcohol-related problems, but it is included in the work of the Republican Association for Prevention of Problems related to Alcohol, Drugs and Tobacco. The State Commission against Alcohol, Drugs and Tobacco, and the Association of the Clubs of Treated Alcoholics of the Republic of Macedonia are also involved in prevention of alcohol-related problems. Both inpatient and outpatient treatment are available, and use of these

resources has been rising since 1980. After treatment, patients are followed-up in a network of clubs for treated alcohol dependents.

Turkey

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	44 438 000	56 098 000	61 945 000
Adult (15+)	27 003 000	36 617 000	40 938 000
% Urban	43.8	60.9	68.8
% Rural	56.2	39.1	31.2

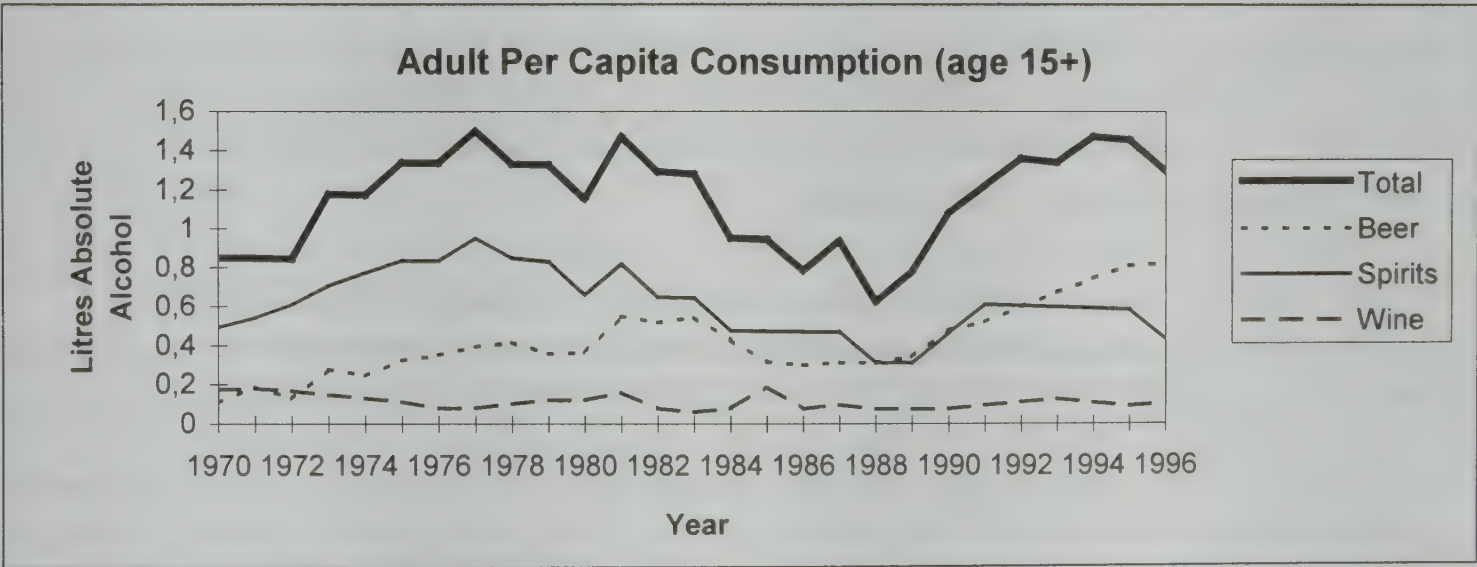
Health status

Life expectancy at birth, 1990-1995 : 64.5 (males), 68.6 (females)
Infant mortality rate in 1990-1995 : 65 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2780, PPP estimates of GNP per capita (current int'l \$), 1995: 5580
Average distribution of labour force by sector, 1990-1992 : agriculture 47%; industry 20%; services 33%
Adult literacy rate (per cent), 1995 : total 82; male 92; female 72

Alcohol consumption and prevalence



Consumption

There is no information available on unrecorded consumption. An increase in adult per capita consumption since 1988 has been fuelled by rising beer consumption since that time.

Age patterns

A study of 2636 15 to 16 year olds (1502 boys and 1134 girls) was conducted in 1995. Fifty-one per cent of the respondents had drunk an alcoholic beverage in the last 12 months, and 24 per cent had drunk to intoxication in the last 12 months. Lifetime prevalence of alcohol use was 61 per cent (62 per cent for boys and 60 per cent for girls).

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1992, 8305 people were discharged from inpatient treatment for alcoholic psychosis which gives an unstandardized rate of 14.1 per 100 000 population.

Mortality

In 1992 the unstandardized death rate per 100 000 population of chronic liver disease was 1.2.

Alcohol policies

Control of alcohol products

The real prices of beer, wine and spirits increased during the early 1990s. Table wines are taxed 17 per cent, beer (four to six per cent alcohol) is taxed 18.5 per cent and spirits (over 35 per cent proof) are taxed 110 per cent.

There are no restrictions on hours or days of sale, but there are restrictions on types and location of outlets. Special permission is required to sell alcoholic beverages in shops, supermarkets and Tekel agencies. There is a state monopoly for the production and distribution of spirits. A licence is required for the production and distribution of beer and wine, and the sale of alcoholic beverages in parks, cafes and restaurants is prohibited.

General and specific health warnings are not required by law. The advertising of alcohol is totally banned in national broadcasting, although beer advertisements are permitted in private broadcasting. Alcohol advertising is banned on radio and restricted either legally or through the use of a voluntary code in all other media. The maximum legal limit for the alcohol content of beer is 5 to 8 per cent; for wine 11 to 12 per cent; and for spirits, 35 to 45 per cent. Labels specifying alcohol content are required by law.

Control of alcohol problems

There is a minimum legal age limit of 18 years for buying alcohol and it is fairly effectively enforced. BAC limit is 0.05 g% for drivers, but it is not effectively enforced. A conviction of driving above the permitted BAC will usually result in a suspended driving licence. Random alcohol breath testing is carried out, but infrequently. There are national mass media programmes which deal with substance use.

The Department of Prevention of Harmful Habits, the Directorate of Mental Health and the General Directorate of Primary Health Care within the Ministry of Health all carry out training activities and determine national policies. The Green Crescent Society carries out preventive activities related to alcohol dependence and other harmful habits and provides public training in these areas.

Alcohol data collection, research and treatment

The Directorate of the Research Institute in TEKEL Enterprises (the state monopoly) is a research institute which specializes in, and has major responsibility for, research on alcohol issues.

The main centre for research and treatment of alcohol and other drug problems is located in Bakirköy, Istanbul and has a capacity of 360 beds. Treatment in the centre is carried out in two phases: cure of physical addiction, which may last for two to four weeks, and cure of psychological dependence, which may last up to one year, using methods of group therapy and individual therapy. Treatment is also carried out a small scale at state hospitals in Manisa, Elazig and Samsun. Private clinics are also involved in the treatment of alcohol dependent persons.

AMATEM, an organization attached to the Bakirköy Mental Health Hospital, specializes in treating persons dependent on alcohol or drugs. The "Adsiz Alkolikler", a voluntary association established by people who have stopped drinking, works to rehabilitate those who are dependent on alcohol.

Turkmenistan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2 864 000	3 657 000	4 099 000
Adult (15+)	1 681 000	2 178 000	2 481 000
% Urban	47.1	44.9	44.9
% Rural	52.9	55.1	55.1

Health status

Life expectancy at birth, 1990-1995 : 61.5 (males), 68.5 (females)

Infant mortality rate in 1990-1995 : 58 per 1000 live births

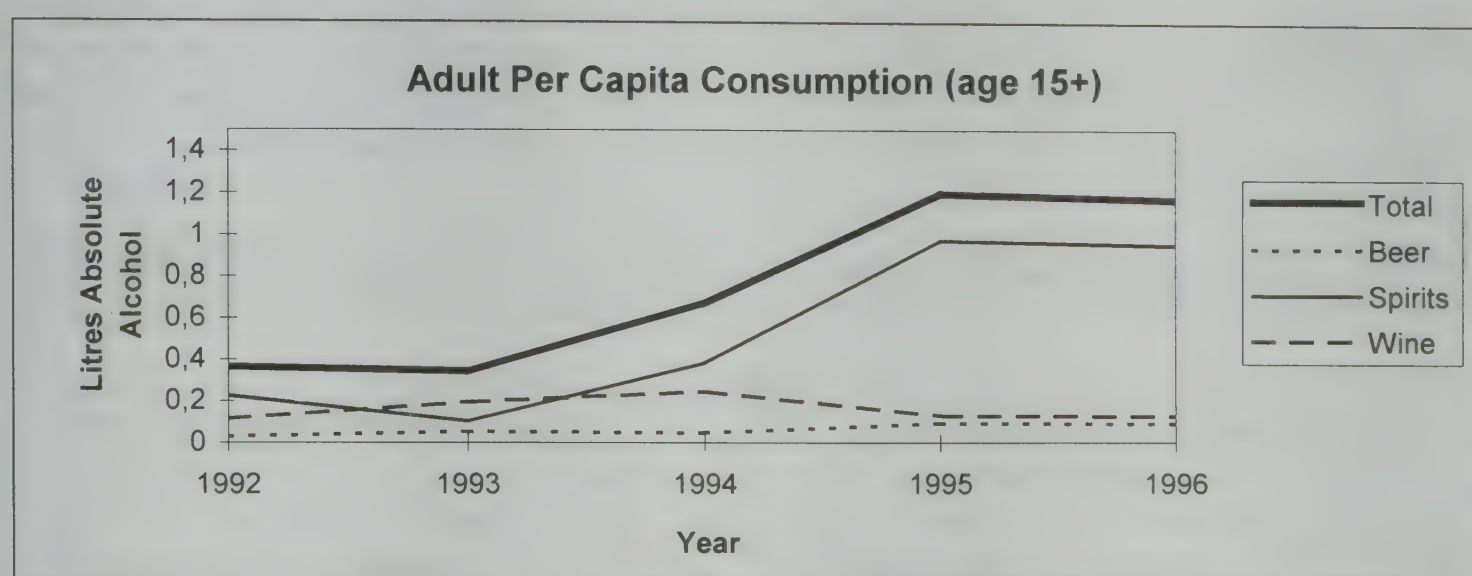
Socioeconomic situation

GNP per capita (US\$), 1995: 920

Alcohol production, trade and industry

Turkmenistan reports production of very low levels of beer and wine.

Alcohol consumption and prevalence



Consumption

WHO/EURO reports recorded per capita consumption of 1.9 litres in 1994. This translates to 3.1 litres per adult, a figure higher than that shown above. As beer production figures are not available after 1993, the above chart reflects consumption from imported beer only after that year. While there is no quantified information on unrecorded consumption, it is not considered to be very significant.

Economic impact of alcohol

Consumer expenditure on alcoholic beverages as a percentage of general expenditure on purchase of goods and payments for services increased from 3.4 in 1990 to 4 in 1994.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Data from an annual report on persons on clinic treatment registers for alcohol dependence on 1 January 1995 show the following:

	INCIDENCE (NEW CASES REGISTERED DURING 1994)		PREVALENCE (ALL CASES REGISTERED UP TO 1/1/95)	
	Number	per 100 000	Number	per 100 000
Alcohol dependence Without psychosis	1 191	27.31	16 699	382.89
Urban men	302	30.86	12 921	1 320.2
Urban women	70	6.98	1 144	114.12
Rural men	213	18.12	2 324	197.66
Rural women	3	0.25	310	25.74
Alcoholic psychosis	93	2.13	95	2.18

The highest morbidity (i.e. rate of new cases of alcohol dependence registered in medical establishments during one year) and prevalence are to be found in men and women in Ashkabad and in

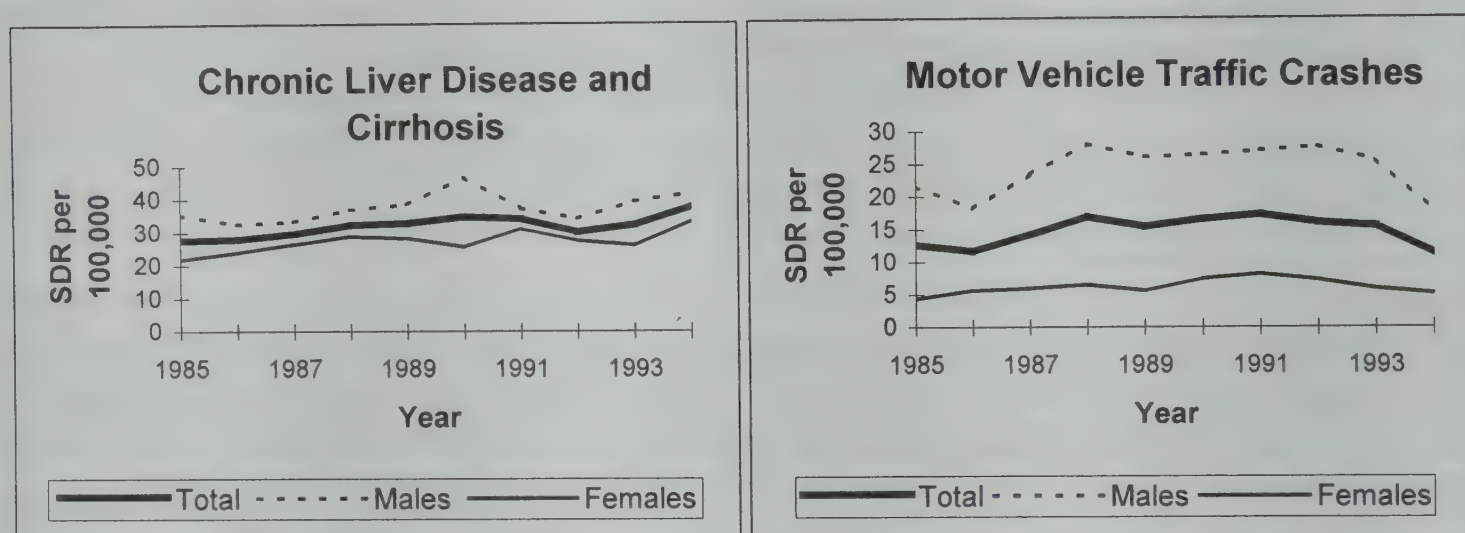
the Balkan Velayat (where the population is predominantly urban). Rates of morbidity and prevalence among women in Ashkabad are about 19.7 and 276.5 per 100 000 population, respectively. The lowest estimates, especially among women, are found in the north (Dashkhovuz) and the south-east (Mary), where the population is 70 per cent rural. These statistics have been relatively stable for the period from 1986-1992. Almost all patients being treated for alcohol dependence (97.7 per cent) are between 20 and 60 years of age. No people below the age of 18 are on the treatment register (although six per cent of the group registered for preventive surveillance are between the ages of 15 and 19). The proportion of women among all registered alcohol dependants has remained between 8 and 10 per cent over the last ten years.

The number of patients (per 100 000 population) with alcohol dependence registered at hospitals and other treatment centres at the end of the year increased slightly from 14.9 to 15.7 between 1990 and 1994.

The rate per 100 000 population of persons receiving inpatient treatment for alcoholic psychosis was 2.1 in 1993 and 1994, similar to the 1990 and 1985 rates but a decrease on the 4.8 recorded in 1980. In 1993, the morbidity (incidence) and prevalence rates per 100 000 population were 0.5 and 1.6, respectively.

Mortality

The SDR per 100 000 population for chronic liver disease was 17.7 in 1994, a decrease on the 19.7 recorded in 1990 and the 20.9 recorded in 1980, but slightly higher than the 16.3 recorded in 1985.



Social problems

The SDR per 100 000 population for motor vehicle traffic crashes involving alcohol was 0.8 in 1994, a decrease on the 2.1 in 1991 and the 2.2 in 1981. The number of persons committing crimes under the influence of alcohol (thousands) fell from 2.4 in 1990 to 1.6 in 1994.

Alcohol policies

Control of alcohol products

The real prices of all three types of alcohol, i.e. beer, spirits and wine have been increasing during the early 1990s. Table wines are taxed 60 per cent, beer (between four and six per cent alcohol) is taxed 10 per cent and spirits (over 35 per cent proof) are taxed 30 per cent. Since August, 1996, new excise taxes on imported alcoholic beverages have been implemented (beer: US\$ 0.5 per litre; all kinds of wine: US\$ 1.5 per litre; strong alcohol beverages: US\$ 1.5 per litre). This will increase the retail price of alcohol beverages.

Restrictions on types and location of outlets were introduced in 1965. Alcohol retail sale near schools, kindergartens, hospitals and in working places is prohibited. There is a state monopoly for the production of all three types of alcohol. A licence is required for distribution.

The draft of a Presidential Decree banning advertising of alcoholic beverages, tobacco and narcotic drugs was prepared and expected to come into effect late in 1995. General and specific health warnings are not required by law. Labels giving alcohol content are required by law, and the maximum legal limit for the alcohol content of beverages is 95 per cent.

Control of alcohol problems

There is a minimum legal age limit of 18 for the distribution of vodka, which is rationed. In June 1995 a minimum legal age limit of 18 years was introduced for buying alcohol of any type in any kind of outlet. The BAC limit is 0.03 g% for drivers. On conviction for a second or subsequent offence of driving above the permitted BAC, suspension of driving licence is usual. The routine method of detecting alcohol intoxication is by breath testing. Random alcohol breath testing is carried out, but infrequently. Blood alcohol content is measured only for special reasons, e.g. forensic cases.

The Department of Psychiatry Services and Prevention of Substance Abuse of the Ministry of Health and Medical Industry of Turkmenistan and the Department for Substance Abuse in the Research Institute of Preventive and Clinical Medicine are involved in the formulation, application, coordination and monitoring of national alcohol policies. Priorities of the early 1990s have been: reducing availability; developing specialized treatment for alcohol dependence and other alcohol problems; and working in schools.

Prevention of substance use/abuse is a significant part of work of the system of narcological dispensaries which provide inpatient and outpatient treatment in the area of substance (including alcohol) use. Each province has not less than one narcological dispensary or psychoneurological dispensary and in rural regions there are outpatient narcological units within general hospitals. These dispensaries are responsible for prevention and treatment of substance abuse on their administrative territory. Narcologists in the dispensaries provide the mass media with information and organize meetings and discussions with various groups of the population.

Five Centres for Health Promotion deal with health education, and the prevention of alcohol-related problems. These centres engage the help of specialists, generally medical doctors with expertise in the area of substance abuse. The centres also publish leaflets, brochures and posters on the issue. Pilot implementation of a school-based programme dealing with all psychoactive substances was carried out in Ashgabat in 1995. The programme was scheduled to be implemented in all schools in Turkmenistan on a phased basis from 1995 to 2000.

Alcohol data collection, research and treatment

The Department of Statistics, in the Ministry of Health and Medical Industry of Turkmenistan, the Department of Psychiatry Services and Prevention of Substance Abuse and the Department for Substance Abuse in the Research Institute of Preventive and Clinical Medicine are all involved in the gathering of alcohol consumption data for the entire population.

Persons dependent on alcohol are registered only with medical establishments, unless sentenced to compulsory treatment in establishments run by the Minister of the Interior. In the period from 1986 to 1992 no more than six per cent of all registered cases of alcohol dependence were treated on a compulsory basis.

Ukraine

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	49 961 000	51 637 000	51 380 000
Adult (15+)	39 266 000	40 569 000	41 051 000
% Urban	61.7	67.5	70.3
% Rural	38.3	32.5	29.7

Health status

Life expectancy at birth, 1990-1995 : 64.3 (males), 74.2 (females)

Infant mortality rate in 1990-1995 : 16 per 1000 live births

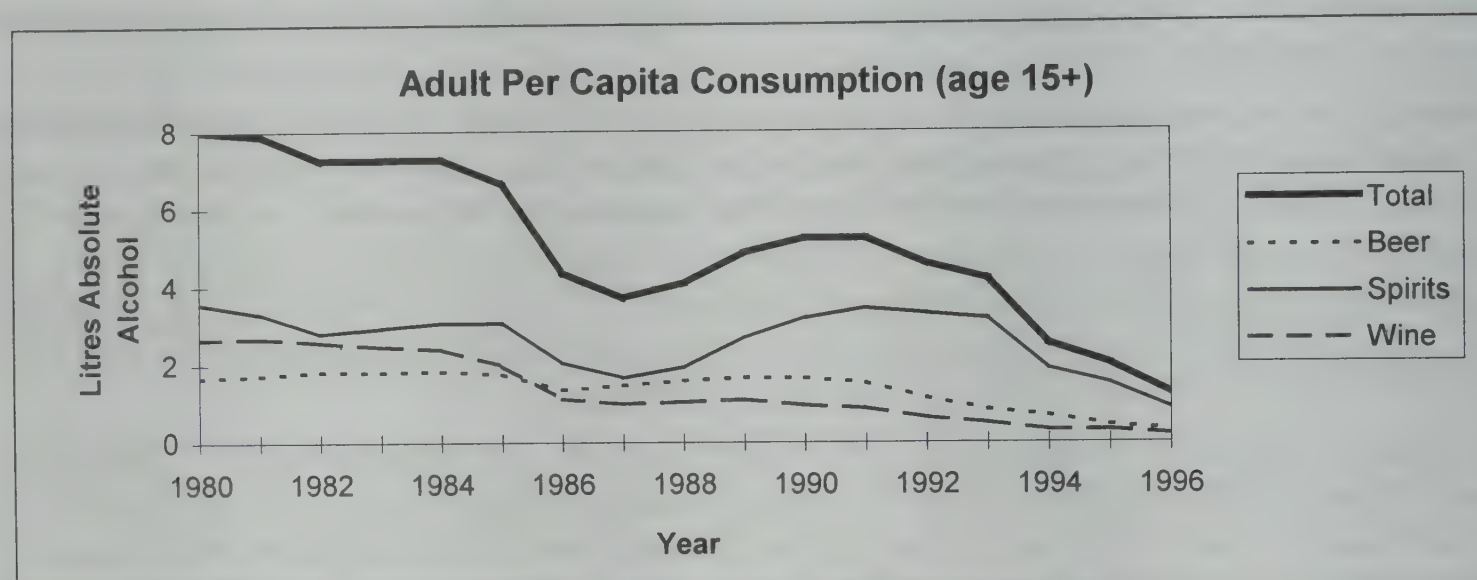
Socioeconomic situation

GNP per capita (US\$), 1995: 1630, PPP estimates of GNP per capita (current int'l \$), 1995: 2400
Average distribution of labour force by sector, 1990 : agriculture 20%, industry 40%

Alcohol production, trade and industry

Ukraine produces beer, distilled spirits and wine. The Seagram Company has formed Seagram Ukraine Ltd. in an effort to produce, distribute, and market new and existing spirits in the Ukraine. Illegal imports of spirits have gained in significance in Ukraine in the late 1990s.

Alcohol consumption and prevalence



Consumption

Recorded consumption of absolute alcohol was approximately 3.4 litres per adult in 1993. It is estimated that unrecorded consumption of pure alcohol was seven litres per capita in 1980, four in 1985 and seven in 1993. This suggests that total adult per capita consumption of alcohol in 1993 was 11.2 litres of absolute alcohol.

Age patterns

A study of 7193 15 to 16 year olds (3332 boys and 3861 girls) was conducted in 1995. The response rate was 93 per cent. Seventy-nine per cent of the respondents had drunk any alcoholic beverage in the last 12 months, and 30 per cent had been drunk in the last 12 months. Lifetime prevalence of alcohol use was 87 per cent (86 per cent for boys and 88 per cent for girls).

In 1978, 16 per cent of 562 rural secondary school students drank alcohol, compared with 66 per cent of 622 vocational-technical school students.

Economic impact of alcohol

Consumer expenditure on alcoholic drinks as a percentage of general expenditure on purchase of goods and payments for services was 3.7 in 1990, and 2.8 in 1991.

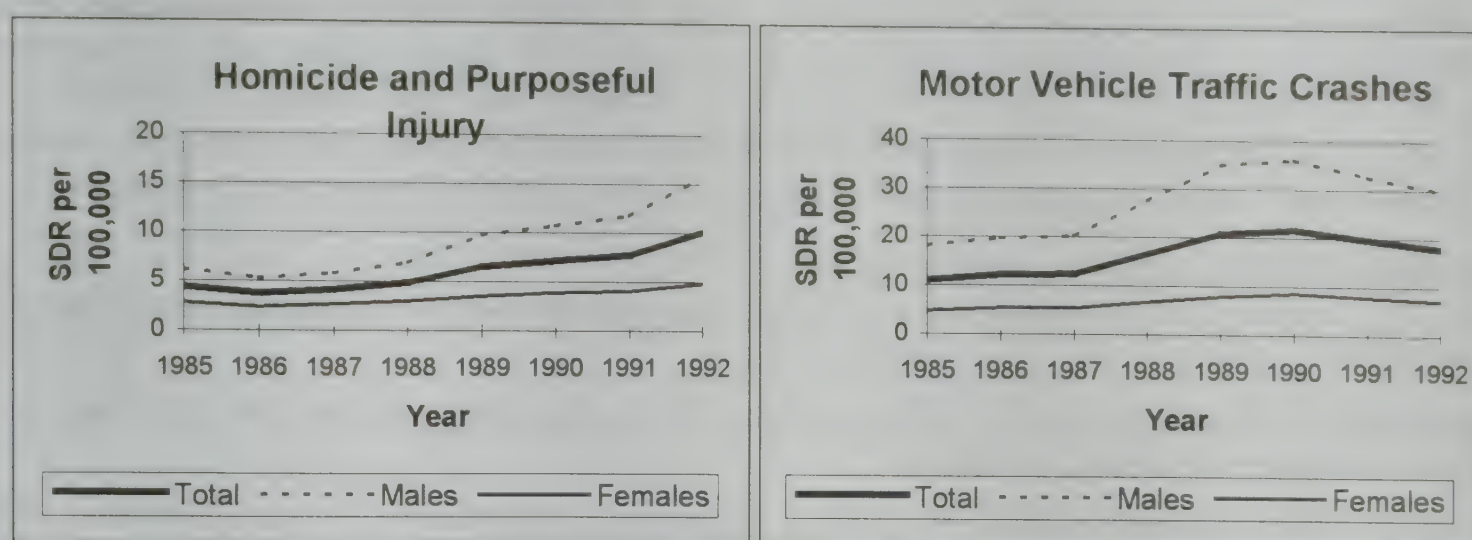
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The rate per 100 000 population of persons treated in hospitals and psychiatric units for alcoholic psychosis was 16 in 1993, compared to 22.8 in 1980 and 8.5 in 1990. The number of patients (per 100 000 population) with alcohol dependence registered at hospitals and other treatment centres during the year decreased from 71.4 in 1990 to 63.9 in 1995.

Mortality

The number of alcohol-related homicides rose from 1102 to 2101 between 1980 and 1993. This number as a percentage of all homicides went from 53.7 to 69.4 during the same period. The SDR per 100 000 population for chronic liver disease and cirrhosis was 16.1 (25.2 for men and 9.6 for women) in 1992.



Social problems

The number of motor vehicle traffic crashes involving alcohol per 100 000 inhabitants was 13.1 in 1992, a decrease from the 16.1 recorded in 1990. The number of arrests for public drunkenness (thousands) increased from 1134 to 1802 between 1980 and 1985, then dropped to 839 in 1990 and rose again to 1359 in 1994. Alcohol-related crimes (as a percentage of all crimes) fell from 29.8 to 22.7 between 1980 and 1985. The number of persons committing crimes under the influence of alcohol (thousands) was 66.8 in 1994, compared with the 54.4 recorded in 1990.

Alcohol policies

Control of alcohol products

The real prices of beer, wine and especially of spirits have been decreasing during the early 1990s. Table wines are taxed 30 per cent, beer (between four and six per cent alcohol) is taxed 20 per cent and spirits (over 35 per cent proof) are taxed 85 per cent.

There are restrictions on hours of sale and location of outlets, but there are no restrictions on days of sale or on types of outlets. Sales have been banned in shops less than 20 square meters, to eliminate kiosk sales. However, the law defines alcoholic beverages as only beverages with over 8.5 per cent alcohol. According to legislation, workplaces and public transport must be alcohol-free.

There is a state monopoly for the production of spirits and fortified wine. A licence is required for the production of beer and table wine and for the distribution of all three types of alcohol, i.e. beer, spirits and wine.

According to Article 32 of the Health Promotion Law (adopted by Parliament in 1992), all advertising of alcoholic beverages is banned in Ukraine. However, no regulations have been issued to enforce this law. Alcohol advertising is therefore widely seen in the mass media but some television stations voluntarily restrict alcohol advertising. In July 1996 a law was passed banning the advertising of alcohol (and tobacco) in the context of media (TV, radio and the press) aimed at young people. Ukraine requires warnings on print advertisements stating: "Excessive alcohol use is harmful to your health." General and specific health warnings are not required by law to appear on alcoholic beverage containers. Labels carrying alcohol content are required by law, but there is no maximum legal limit for the alcohol content of beverages. Spirits with up to 95 per cent alcohol can be purchased in shops.

Control of alcohol problems

There is a minimum legal age limit of 21 for buying alcohol. The Ministry of Interior focuses on drinking and driving. The BAC limit is 0.0 g% for drivers. On conviction for a first offence for driving above the permitted BAC, suspension of driving licence is usual. Random alcohol breath testing is not carried out.

There is no national agency for the prevention of alcohol problems. A programme has been established by the Ministries of Health, Internal Affairs, Education and Justice concerning organizing and legal work, demand reduction for alcohol and tobacco, and treatment and social and medical rehabilitation of patients with signs of alcohol and tobacco dependence. A priority of the early 1990s has been to develop the role of the criminal justice system in the prevention and management of alcohol problems. In 1992 a law on health promotion was passed in Parliament, stating that the policy

was to decrease alcohol consumption and an advertising. Some education programmes exist but none at the national level. The Independent Sobriety Association aims at decreasing total consumption of alcohol and other drugs and advocates the choice of alcohol and other drug-free lifestyles. The Alcohol and Drug Information Centre (ADIC) documents the nature and extent of alcohol problems, advocates adequate responses and trains voluntary and professional staff for preventive work.

Alcohol data collection, research and treatment

The Ministry of Statistics and the Ministry of Health are responsible for analyzing, disseminating and utilizing data for the formulation of national policies.

The Decree of the Supreme Soviet of Ukraine, dated 17 August 1966, as amended, provides for “the compulsory treatment of chronic alcoholics.”

From 1980 to 1988 treatment facilities for alcohol dependence increased as did staff numbers. Places for the treatment of alcohol dependence in special hospitals increased from 2.2 per 100 000 inhabitants to 3.8 over the same period. However, since 1988 the number of places and staff has decreased by up to 50 per cent in some regions of Ukraine.

United Kingdom of Great Britain and Northern Ireland (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	56 330 000	57 411 000	58 258 000
Adult (15+)	44 561 000	46 491 000	46 856 000
per cent Urban	88.8	89.1	89.5
per cent Rural	11.2	10.9	10.5

Health status

Life expectancy at birth, 1990-1995 : 73.6 (males), 78.7 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 18 700, PPP estimates of GNP per capita (current int’l \$), 1995: 19 260

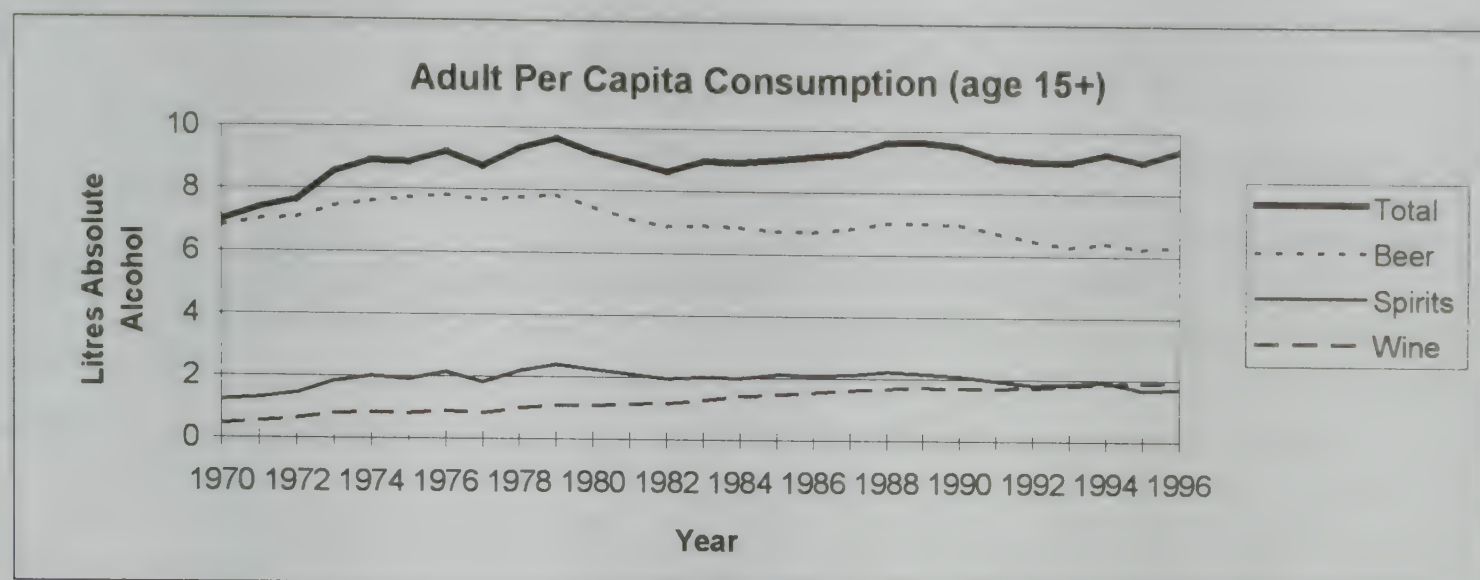
Average distribution of labour force by sector, 1990-1992 : agriculture 2%; industry 28%; services 70%

Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

The United Kingdom’s (UK) brewing industry saw a wave of consolidation until the decision by the United Kingdom’s Board of Trade to block the proposed merger Bass and Carlsberg-Tetley. The decision leaves the country’s largest brewer, Scottish Courage, with an approximately 31 per cent share of the domestic market for beer. In regard to spirits, the world’s largest marketer of distilled spirits, UK-based Grand Metropolitan, announced that it would merge with the number two global spirits purveyor, Guinness, to form a new company to be called Diageo, from the Latin word for day and the Greek word for world. Guinness’ strength in whisky distilling, concentrated in Scotland, will complement Grand Metropolitan’s global dominance in vodka (Smirnoff), gin (Gilbey’s) and brandy (Dreher).

Alcohol consumption and prevalence



Consumption

Figures obtained directly from the country itself (by *World Drink Trends*) yield the graph above. Illicit distilling is thought to be a small problem in the UK. It is not illegal to produce beer and wines at home, and an increasing number of people make their own with the raw materials widely available. There is however no specific estimate available that quantifies illicit and home production.

Prevalence

The 1992 annual General Household Survey found that men aged 16 years and over were drinking an average of 15.9 units of alcohol a week - about three times as much as women. (N.B. In the U.K., a unit is defined as eight grams of absolute alcohol.) About 27 per cent of men and 11 per cent of women aged 18 years and over were drinking more than 21 and 14 units a week, respectively, and 6 per cent of men and 2 per cent of women were drinking more than 50 and 35 units, respectively. The proportion of men whose consumption is above 21 units has remained steady since 1980, but there is some suggestion of a slight increase among men over the age of 45.

As in surveys carried out in previous years, the association between alcohol consumption and socioeconomic group in 1992 was much more pronounced for women than for men. The proportion of women who drank more than 14 units was higher among those in non-manual groups than among those in manual labour groups. Approximately 15 per cent of women in the professional group usually drank more than 14 units a week, compared with eight per cent of women in the unskilled manual group. Among men, those in the employers and managers group and the unskilled manual group were slightly more likely than others to have drunk more than 21 units weekly.

A 1990 survey among persons aged 15 years and over found that 16 per cent were frequent consumers (drinking alcohol three or four days per week), 36 per cent were moderate consumers and 48 per cent drank infrequently (weekly or never).

Age patterns

According to a decade-long survey of more than 8000 boys and girls published in 1997, four children in five started drinking alcohol at home by the ages of 14 or 15. By the tenth year of compulsory schooling, boy drinkers average more than 10 units of alcohol a week - equivalent to 5 pints of beer or 10 measures of spirits - and girls average 10 units. Three per cent of boys aged 12 or 13 years and more than seven per cent of boys aged 14 or 15 years reported drinking more than 21 units of alcohol per week. Beer and lager were the most common alcoholic beverages for boys, while wine was the most popular among girls. Alcopops were the second most common for both sexes. Among 14 to 15 year olds, 76 per cent of boys and 79 per cent of girls said they drank "to get drunk."

A study of 7722 15 to 16 year olds (3630 boys and 4092 girls) was conducted in 1995. The response rate was 84 per cent. Ninety per cent of the respondents had drunk any alcoholic beverage in the last 12 months, and 70 per cent had been drunk in the last 12 months.

Economic impact of alcohol

Total expenditure on alcoholic beverages as a percentage of total consumer expenditure rose from 5.7 in 1960 to 7.5 in 1980, dropping to 7.4 in 1984.

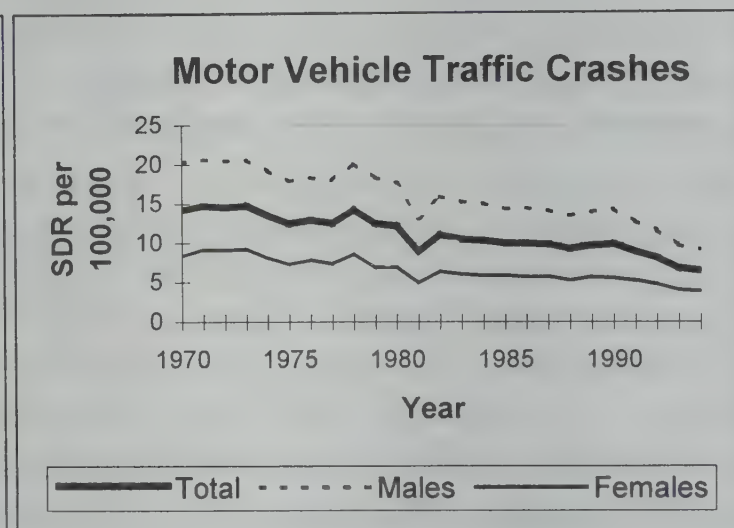
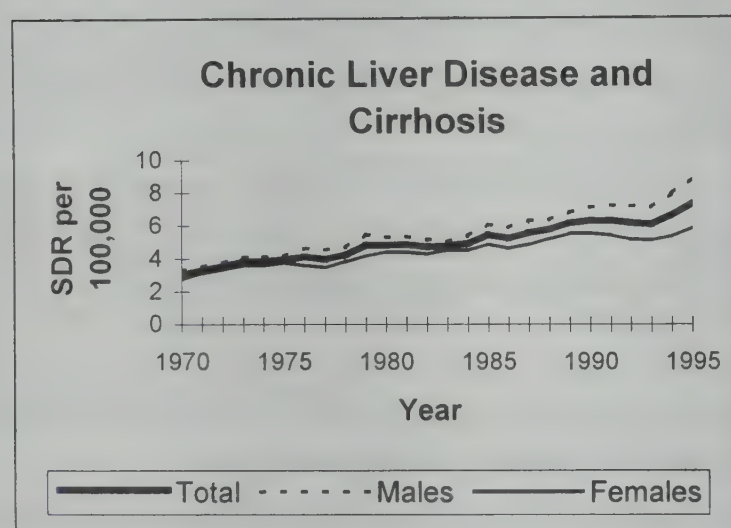
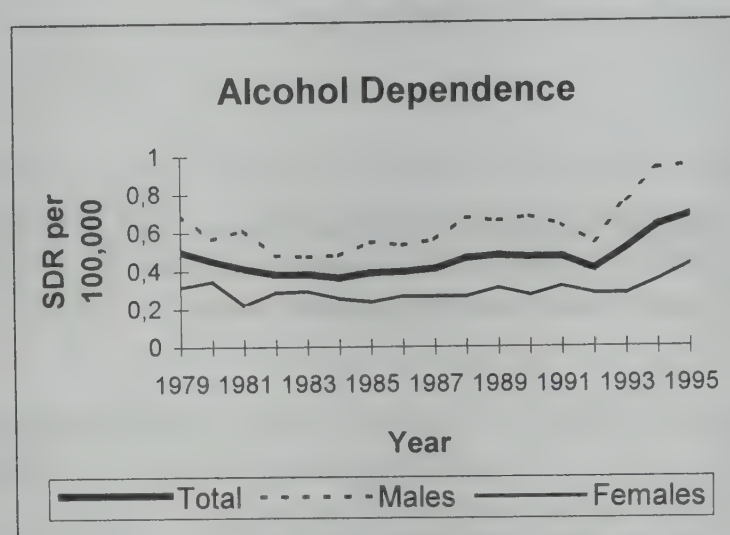
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The SDR per 100 000 population from alcohol dependence has risen fairly rapidly since 1991, but remains at a relatively low level by global standards.

Mortality

The SDR for chronic liver disease and cirrhosis rose from 3.0 to 7.3 per 100 000 population between 1970 and 1995.



Social problems

It is estimated that alcohol is a factor in up to 30 per cent of child abuse cases. In a survey of more than 8000 boys and girls, close to four per cent had experienced physical violence associated with drinking in the home within the previous week. The number of road traffic crashes per 100 000 population involving alcohol was 21.9 in 1992, fairly similar to the 1985 figure. The number has fluctuated since then, being at its highest in 1989 at 25.5 and its lowest in 1990 at 17.5.

Alcohol policies

Control of alcohol products

In response to EEC rules, it was necessary to reduce taxes levied on wines. Price indices of alcoholic beverages have shown enormous increases over the past 20 years. Beer prices increased 808 per cent between 1963 and 1984, but relative to personal disposable income the cost per litre, in terms of pure alcohol, fell by 33 per cent between 1960 and 1983. The hours of work required to pay for a pint of beer diminished for manual workers by 14 per cent for men and 26 per cent for women, and for non-manual workers by 26 per cent and 21 per cent respectively. The respective reductions in hours of work required to pay for a bottle of whisky were 61 per cent and 70 per cent and 63 per cent and 70

per cent. The real prices of beer and spirits have been stable, and that of wine decreasing, over the last five years.

Table wines are taxed 51.1 per cent, beer (four to six per cent alcohol) is taxed 31 per cent and spirits (over 35 per cent proof) are taxed 66.5 per cent. Duties are rising in line with inflation, adding £0.19 (US\$ 31.03) to a bottle of spirits, £0.01 (US\$ 1.63) to a pint of beer, £0.04 (US\$ 6.53) to a bottle of table wine and £0.01 (US\$ 1.63) to high strength alcohol, including alcopops. In 1997, the Chancellor of the Exchequer announced that the rise of duty for wine, beer and spirits would rise in line with inflation, or three per cent. This will mean a US\$ 0.31 rise in the price of a bottle of whisky, a US\$ 1.63 rise for a pint of beer, and a US\$ 0.065 rise for a bottle of wine. The Chancellor also announced a review of excise duties on alcoholic drinks in light of the distortions of trade caused by cross-border shopping.

There are restrictions on hours and days of sale and on type and location of outlets. Some local authorities have introduced local By-laws restricting alcohol consumption in certain public places, particularly outdoors. A licence is required for the production or distribution of beer, wine or spirits.

A voluntary code governs the advertising of all three types of alcohol, i.e. beer, spirits and wine, and in 1997 the Advertising Standards Authority found that 98 per cent of alcohol advertisements in the UK follow standards set by the industry. General and specific health warnings are not required by law. Television transmission of alcohol advertising is banned between 16.00 and 18.00 hours (excluding weekends and bank holidays), between religious programmes, and immediately before, during or after children's programmes. Complaints made against advertisements are considered by the Advertising Standards Authority. Labels for alcohol content are required by law. Discussions are being held with the beverage alcohol industry about labelling the number of units contained in each alcoholic beverage container. There is no maximum legal limit for the alcohol content of beverages.

Control of alcohol problems

There is a minimum legal age limit of 18 for purchasing alcoholic beverages. However it is possible to consume some alcoholic beverages in bars or restaurants at 16 or 17 years of age. BAC limit is 0.08 g% for drivers. On conviction for a first or subsequent offence of driving above the BAC limit, suspension of driving licence is usual. Random alcohol breath testing is not carried out.

A recent strategy document set a target of reducing the proportion of men drinking more than 21 units of alcohol per week from 28 per cent in 1990 to 18 per cent by 2005, and the proportion of men drinking more than 14 units of alcohol per week from 11 per cent in 1990 to seven per cent by 2005. Other priorities of the early 1990s have been: mass media campaigns to encourage safer drinking; encouraging lighter drinking in work settings; increasing the role of primary health care teams in the prevention and early detection of alcohol problems; developing the role of the social welfare system and of the criminal justice system in the prevention and management of alcohol problems; developing specialized treatment for alcohol dependence and other alcohol problems and addressing particular alcohol problems.

The Health Education Authority in England has been the major organization carrying out Government alcohol prevention policies at the national level. It engages in education programmes and campaigns. The Ministerial Group on Alcohol Misuse of the Department of Health and Social Security has launched a number of initiatives, in cooperation with the alcohol industry where appropriate.

The Health Education Authority concentrates on education and prevention. It collaborates with other bodies in producing materials for use in schools and youth clubs on alcohol problems. The Scottish Health Education Group has produced alcohol education films for use in schools. There are mass media, school-based and workplace programmes, some of which deal with alcohol alone and some with substance use in general. This latter approach is particularly a feature of school-based programmes.

Each Health District or Health Board in the UK has a health education/health promotion department which carries out alcohol prevention work in that community/district. There are more than 120 such districts in the country. Alcohol Concern, the leading national voluntary organization, is also involved in preventive work at the national level. It is a national umbrella organization for the voluntary sector. It engages in information, education and prevention initiatives and in improvement of voluntary sector

services for alcohol abusers. In addition, many local "councils on alcoholism" are involved in prevention work.

Alcohol data collection, research and treatment

Several universities have research and training units concerned with alcohol problems, such as the Addiction Research Unit at the Institute of Psychiatry, University of London; the Addiction Research Centre at Hull and York; the Alcohol Research Group and Alcohol Problems Clinic at the University of Edinburgh; and the Alcohol Studies Centre at Paisley. Training on alcohol problems is now included in all medical and social work education.

According to a report on the pattern and range of services for problem drinkers, produced by the Advisory Committee on Alcoholism established in 1975, the provision of specialized services was inadequate and primary health personnel were ill equipped and lacking in sufficient time to deal with the variety and volume of problems arising. There has therefore been a considerable increase in interest in improving skills in the recognition and management of alcohol problems at various levels and studying methods of providing simple advice, encouraging self-monitoring and extending outpatient intervention.

In 1988 the Ministerial Group on Alcohol Abuse was established in recognition of the need to coordinate various types of treatment provision to suit the requirements of the widely differing subgroups of people with alcohol problems. Treatment for alcohol problems is available within the National Health Service through general practitioners, hospital care (detoxification, specialized alcohol dependence units, outpatient and day patient treatment), through the social services, and through voluntary agencies (councils on alcohol dependence, Alcoholics Anonymous, Al Anon, churches and the Salvation Army).

Uzbekistan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	15 936 000	20 420 000	22 843 000
Adult (15+)	9 415 000	12 067 000	13 723 000
% Urban	40.8	40.6	41.3
% Rural	59.2	59.4	58.7

Health status

Life expectancy at birth, 1990-1995 : 66.0 (males), 72.2 (females)
Infant mortality rate in 1990-1995 : 41 per 1000 live births

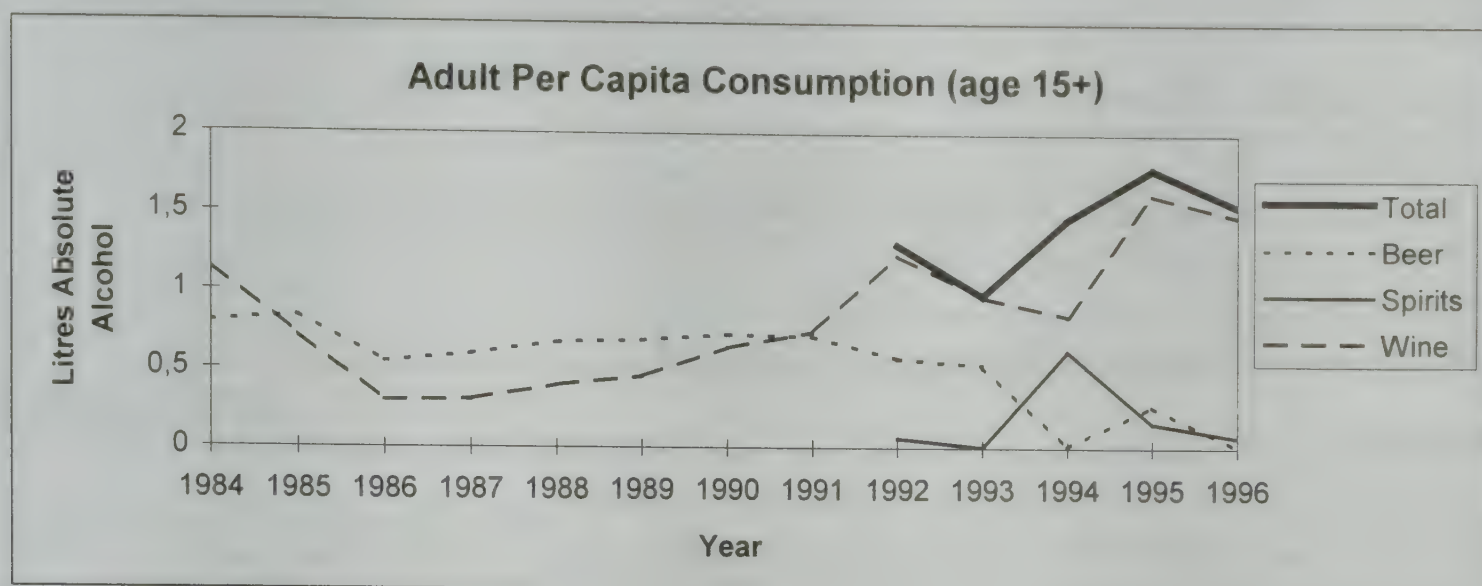
Socioeconomic situation

GNP per capita (US\$), 1995: 970, PPP estimates of GNP per capita (current int'l \$), 1995: 2370
Average distribution of labour force by sector, 1990-1992 : agriculture 17%; industry 20%; services 63%

Alcohol production, trade and industry

Uzbekistan reports production of beer and wine.

Alcohol consumption and prevalence



Consumption

Due to gaps in the data available, the best estimate of recorded consumption is in 1995, when adults drank 1.78 litres of pure alcohol per capita. There are no data available on the extent of unrecorded consumption.

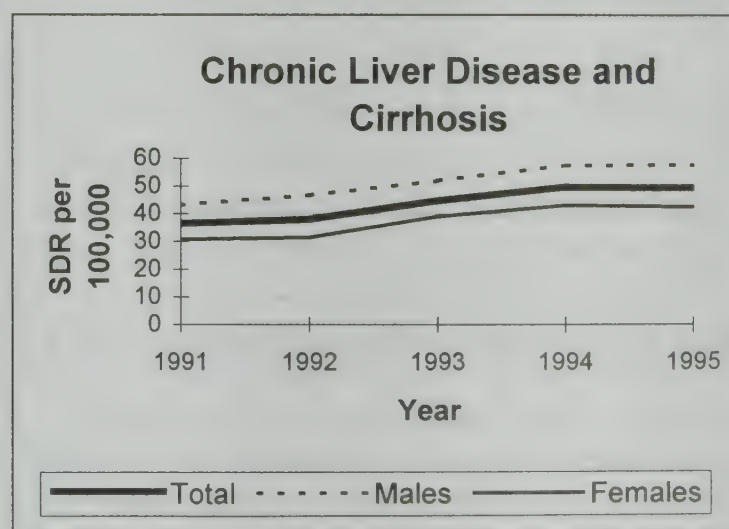
Economic impact of alcohol

Consumer expenditure on alcoholic drinks as a percentage of general expenditure on purchase of goods and payments for services decreased from 2.9 to 1.9 between 1990 and 1995.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of patients per 100 000 population with alcohol dependence registered at hospitals and other treatment centres during the year fell from 8.4 in 1990 to 4.7 in 1995.



Health problems

A cross sectional study was conducted among 1569 men. All subjects in the study had an oral examination, and oesophagoscopy was performed in 1344 men. Alcohol intake was not found to be independently associated in any way with the presence of oral and oesophageal precancerous lesions.

Social problems

The number of persons committing crimes under the influence of alcohol (thousands) decreased from 8.2 to 6.7 between 1990 and 1994.

Yugoslavia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	9 522 000	10 156 000	10 849 000
Adult (15+)	7 230 000	7 782 000	8 459 000
% Urban	46.3	53.1	56.5
% Rural	53.7	46.9	43.5

Health status

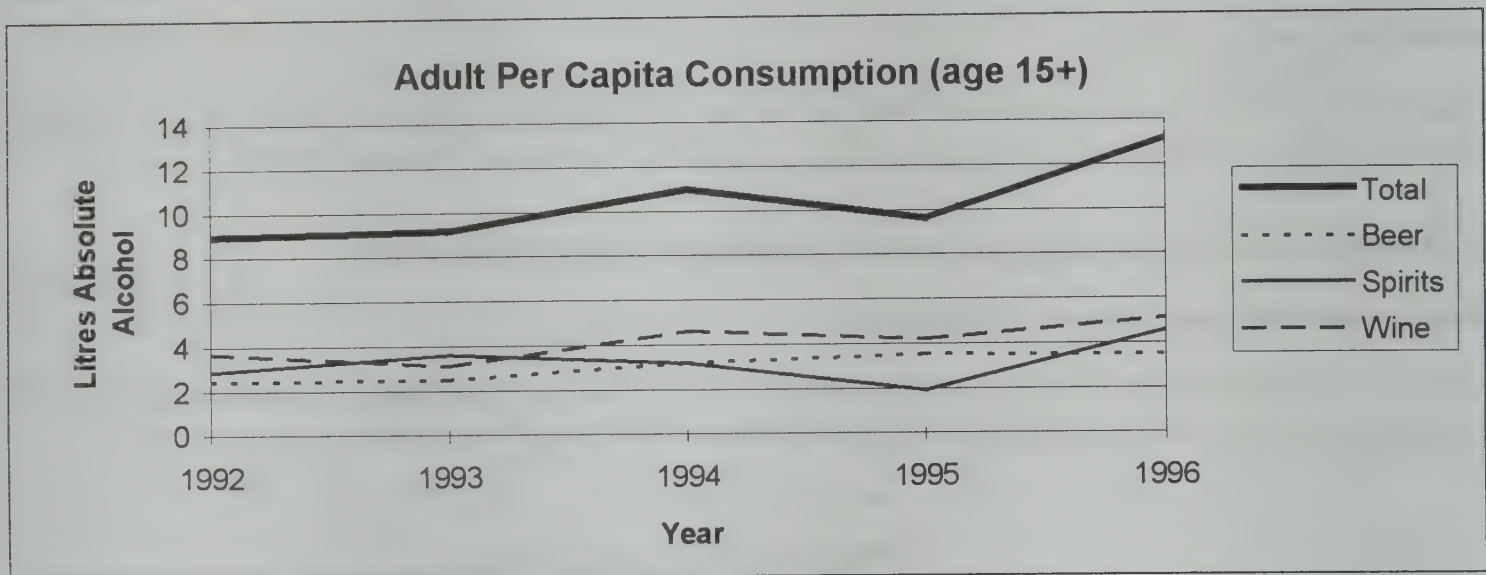
Life expectancy at birth, 1990-1995 : 69.5 (males), 74.5 (females)

Infant mortality rate in 1990-1995 : 20 per 1000 live births

Alcohol production, trade and industry

Yugoslavia produces beer, distilled spirits and wine.

Alcohol consumption and prevalence



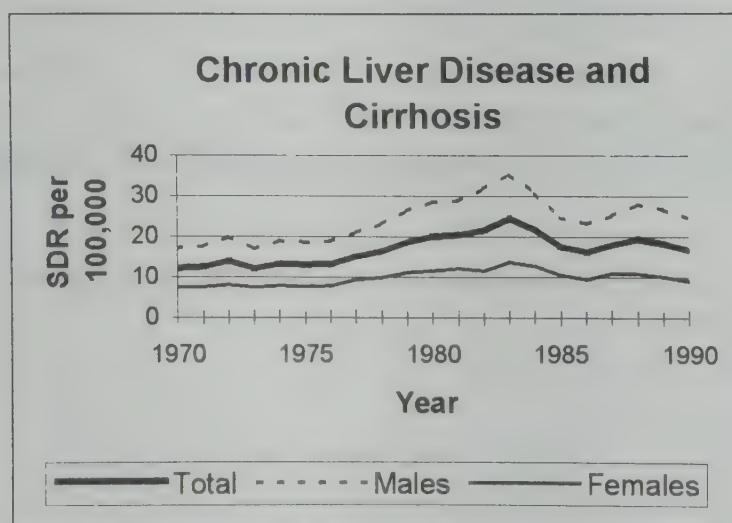
Consumption

Consumption has risen recently as a result of an increase in spirits consumption. There is no information available regarding unrecorded consumption.

Mortality, morbidity, health and social problems from alcohol use

Mortality

The SDR per 100 000 population from chronic liver disease and cirrhosis peaked at 24.4 in 1983, and had fallen to 16.7 by 1990, the last year for which data are available.



South-East Asia Region

Bangladesh

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	88 221 000	108 118 000	120 433 000
Adult (15+)	46 615 000	62 878 000	72 874 000
% Urban	11.3	15.7	18.3
% Rural	88.7	84.3	81.7

Health status

Life expectancy at birth, 1990-1995 : 55.6 (males), 55.6 (females)

Infant mortality rate in 1990-1995 : 108 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995 : 240, PPP estimate of GNP per capita (current int'l \$) : 1380

Average distribution of labour force by sector, 1990-1992 : agriculture 59%; industry 13%; services 28%

Adult literacy rate (per cent), 1995 : total 38; male 49; female 26

Alcohol production, trade and industry

As a primarily Muslim country, Bangladesh has no formal alcohol industry and very little alcohol trade. Home production of alcohol takes place, but figures are not available.

Alcohol consumption and prevalence

Lower socioeconomic classes are known to consume a local alcoholic beverage called “*cholaī*”, while labourers drink another distilled beverage known as “*Bangla Mad*.” A section of the formally educated citizenry consumes imported alcohol including whisky and beer.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Experts estimate the number of alcohol-dependent people in the country to be roughly 300 000, less than one half of one per cent of the adult population.

Alcohol policies

Control of alcohol products

Production, sale and consumption of alcoholic beverages is prohibited by law. Importation of alcoholic beverages is allowed for consumption by foreign nationals and tourists.

Control of alcohol problems

The government’s primary strategy for dealing with alcohol is prohibition. Some NGOs active in health education include alcohol problems as a component of their work.

Alcohol data collection, research and treatment

The government has established one central treatment centre for alcohol and other drug dependence at Dhaka and three regional centres at Rajshahi, Khulna and Chittagong.

Bhutan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 237 000	1 544 000	1 638 000
Adult (15+)	740 000	916 000	966 000
% Urban	3.9	5.3	6.4
% Rural	96.1	94.7	93.6

Health status

Life expectancy at birth, 1990-1995 : 49.1 (males), 52.4 (females)

Infant mortality rate in 1990-1995 : 124 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995 : 420, PPP estimate of GNP per capita (current int'l \$) : 1260

Average distribution of labour force by sector, 1990-1992 : agriculture 92%; industry 3%; services 5%

Adult literacy rate (per cent), 1995 : total 45; male 56; female 28

Alcohol production, trade and industry

Alcoholic beverages are widely available in Bhutan, and include the locally brewed beverage *ara* as well as commercially distilled country liquor, wine and beer. There are three large distilleries and a few beer and wine factories. The total value of alcohol imports in 1994 was US\$ 287 720, roughly one quarter of one per cent of the country's total imports.

Alcohol consumption and prevalence

Consumption

Alcohol is an integral part of cultural and religious ceremonies, and is routinely offered to guests. There are no data available on how much alcohol is consumed in Bhutan.

Alcohol policies

Control of alcohol products

The government has fixed limits on brewing in order to prevent food scarcities as a result of diversion of food grains into home production of alcoholic beverages.

Control of alcohol problems

Selling alcohol to persons under the age of 18 and driving while intoxicated are punishable offences.

Democratic People's Republic of Korea

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	18 260 000	21 774 000	23 917 000
Adult (15+)	10 863 000	15 550 000	16 959 000
% Urban	56.9	59.8	61.3
% Rural	43.1	40.2	38.8

Health status

Life expectancy at birth, 1990-1995 : 67.7 (males), 74 (females)
Infant mortality rate in 1990-1995 : 24 per 1000 live births

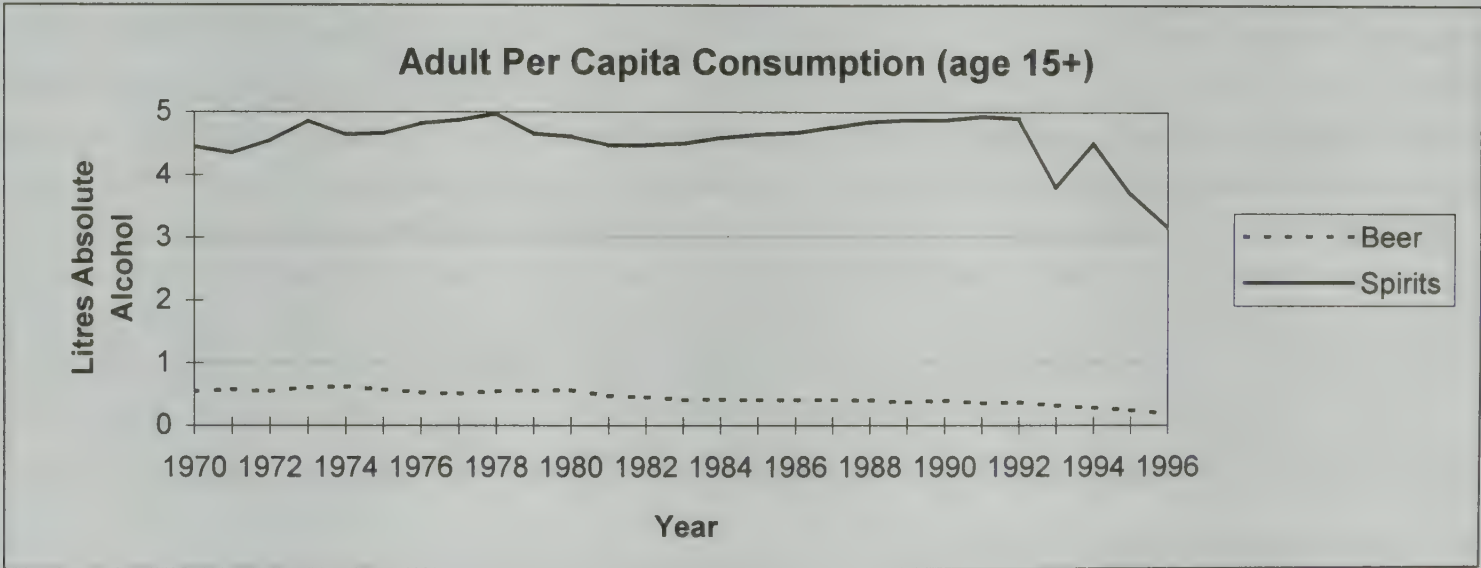
Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 43%; industry 30%; services 27%

Alcohol production, trade and industry

The Democratic People’s Republic of Korea produces beer and distilled spirits, and imports beer.

Alcohol consumption and prevalence



Consumption

Recorded alcohol consumption comes primarily from distilled spirits. There are no data available regarding consumption of smuggled or informally- or home-produced alcohol.

India

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	688 856 000	850 638 000	935 744 000
Adult (15+)	423 305 000	542 391 000	606 250 000
% Urban	23.1	25.5	26.8
% Rural	76.9	74.5	73.2

Health status

Life expectancy at birth, 1990-1995 : 60.4 (males), 60.4 (females)

Infant mortality rate in 1990-1995 : 82 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 340, PPP estimates of GNP per capita (current int'l \$), 1995: 1400.

Average distribution of labour force by sector, 1990-1992: agriculture 62%; industry 11%; services 27%

Adult literacy rate (per cent), 1995 : total 52; male 65; female 38

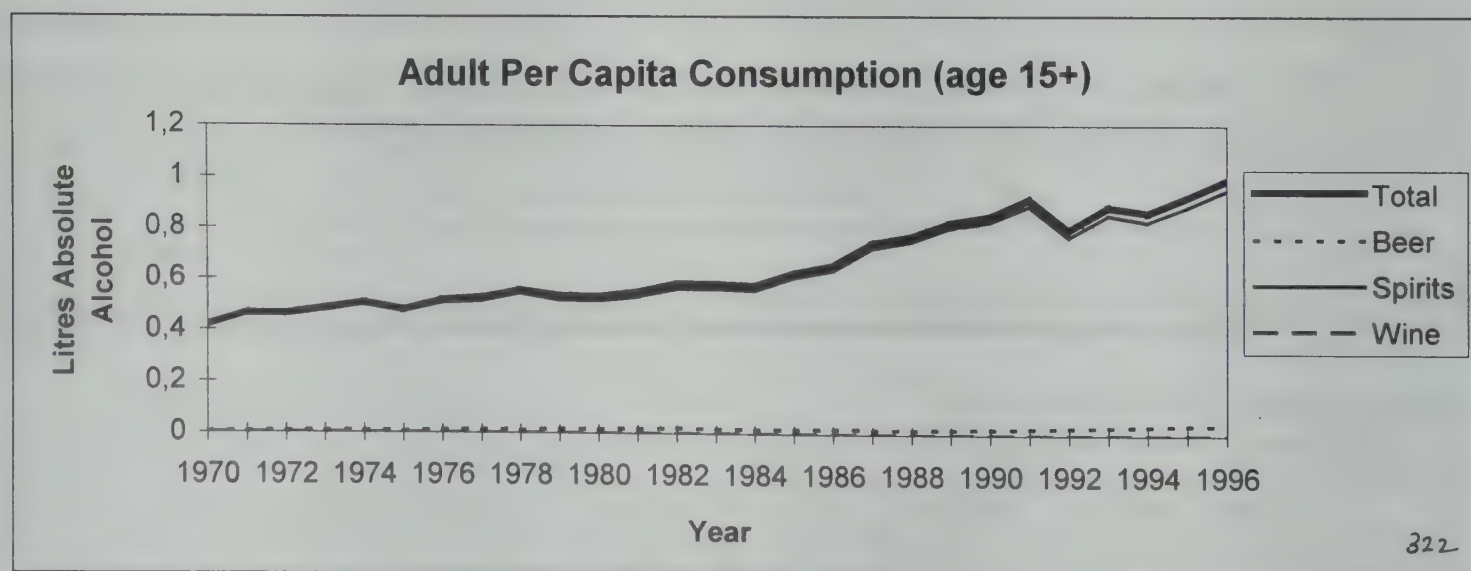
Alcohol production, trade and industry

In the formal sector, alcohol distribution is administered in a three-tier system, with approximately 50 alcohol manufacturers selling through nearly 1500 wholesalers to 28 000 liquor outlets. These 28 000 retailers comprise of only three per cent of all retailers in the country. The market is highly concentrated in the major metropolitan areas, with the top six cities representing 80 per cent of potential case sales.

The Indian beer industry currently produces 4.32 million hectolitres of beer per year, and is growing at a rate of 17 per cent annually. India's wine industry is extremely small. The spirits industry is divided into two segments: "India-made foreign liquor" (whisky, gin, rum, brand, liqueurs, vodka) and "India-made country liquor" (licensed distilled spirits, made locally). Common varieties of "country liquor" are *arracte*, *desi sharab* and *tari*. Illicit liquor is also produced clandestinely in small production units. Home production for self consumption is also common in some parts of India. An estimated 1.5 million people are employed in the production and sale of alcoholic beverages.

A number of foreign companies have taken notice of India's increasing economic liberalization, and are entering into joint ventures with Indian companies. Stroh Brewery Company signed a licensing agreement with Rajasthan Breweries in 1994 to allow Rajasthan to produce, distribute and market Stroh's products throughout India. In early 1995, Anheuser-Busch announced that it would enter the Indian market through a joint venture with Bombay-based Shaw Wallace and Co Ltd., India's third-largest brewer. Other companies to negotiate access to the Indian market include Allied-Domecq and Brown-Forman, both of whom have signed equal profit sharing ventures with Jajatjit Industries of New Delhi; Guinness, who entered into a joint venture with United Breweries India; and Seagram, whose wholly owned subsidiary (Seagram India) will produce a range of distilled spirits and fruit juices, as well as providing technological assistance to the wine industry.

Alcohol consumption and prevalence



Consumption

Both beer and spirits consumption have been rising recently, possibly due to the liberalization of the Indian market. Very little wine is consumed in India. Unrecorded or illicit consumption is estimated at 50 per cent of recorded consumption, suggesting that total adult consumption of alcohol in 1996

was approximately two litres of pure alcohol (assuming very little wine consumption). Among certain tribal groups and tea plantation workers, there are substantial numbers of women drinking, although generally speaking, over 95% of the female population are abstinent.

Prevalence

No national prevalence study is available. Regional general population surveys have found that women drink very little throughout the country. Use among men varies from 16.7 per cent to as high as 58.3 per cent, varying by the degree of urbanization as well as by region. Using an average of 60 per cent male abstinence and almost total female abstinence, per capita consumption of adult drinkers is approximately nine litres of absolute alcohol.

Age patterns

Studies from the late 1970s and early 1980s found that 12.7 per cent of high school students, 32.6 per cent of university students, and 31.6 per cent of non-student young people were using alcohol. Medical students in the same period reported much higher prevalence of between 40 and 60 per cent. Studies in the 1990s suggest abstinence rates of 83-97% in 15-19 year olds.

Economic impact of alcohol

The total revenues from alcoholic beverages excise and sales taxes for 1995-1996 were approximately 180 000 million Indian rupees (US\$ 5 billion). Duties on alcohol make up as much as 23 per cent of some Indian states' revenues.

Household expenditure studies in the 1960s found families spending anywhere from 3 to 45 per cent of their income on alcohol. There are no more recent data available. Approximately 15 to 20 per cent of absenteeism and 40 per cent of accidents at work are attributed to alcohol by industry sources.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A general population survey in 1984 in Western India estimated probable incidence of alcohol dependence at 3 per cent overall, 5.6 per cent among males and 0.5 per cent among females. Given regional variations, overall prevalence is more likely to be between one and two per cent.

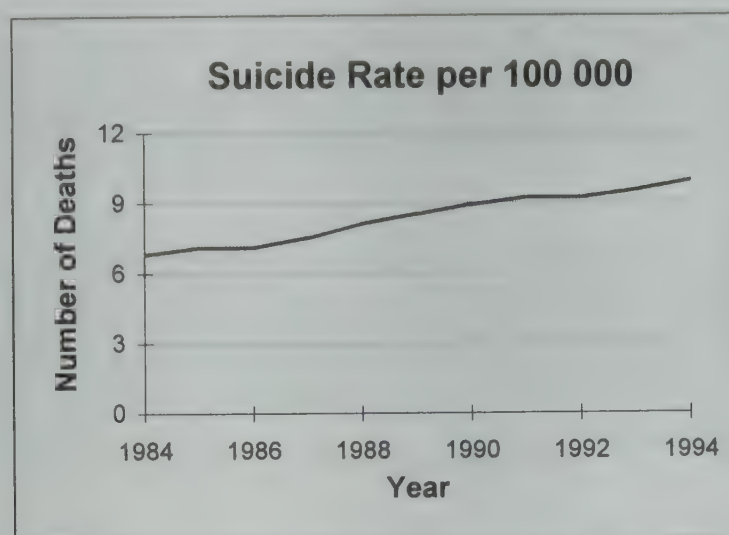
Mortality

Follow-up of young and middle-aged patients examined in hospital and diagnosed with alcohol dependence found mortality rates of 5.5 per cent after 18 months, and 11.3 per cent after four to five years. Approximately 300 people die every year because of methanol poisoning from alcohol beverages. An additional 3000 individuals are affected with long-term disabilities such as blindness.

Morbidity

Most liver cirrhosis in India is not alcohol-related. A review of Indian studies of biopsy-proven cases of liver cirrhosis from 1933 to 1975 found a cumulative mean of 16 per cent from patients with alcohol dependence. However, among alcohol dependent patients, three studies have found that less than 14 per cent had normal livers. The majority had hepatitis, with significant numbers showing fatty changes and cirrhosis or pre-cirrhosis.

Although incidence of cancers in India, at the rate of 75 per 100 000 population is lower than in many developed countries, both oesophageal and oral cancer are particularly common. Even after controlling for tobacco use, numerous studies have found an association between oral cancers and alcohol use. Among them, a 1989 study of 187 cases of gingival cancers and 895 controls showed a positive association with alcohol use, and in 1994 a study of 713 oral cancer patients from Bombay reported a relative risk of 1.42 with alcohol use. Case control studies have found that alcohol use increases the relative risk of oesophageal cancer, one study finding an adjusted odds ratio of between 1.5 and 2.7 for those less than 60 years old. A synergistic effect was observed for alcohol and tobacco use. An estimated 25 per cent of motor vehicle crashes are alcohol-related. According to one study, between 5 and 10 per cent of men who have attempted suicide have been found to be under the influence of alcohol. The overall recorded suicide rate in India has been increasing since 1984.



Alcohol policies

Control of alcohol products

The constitution of India declares that "the State shall endeavour to bring about prohibition of the consumption of intoxicating drinks." However, since independence in 1947 successive governments have followed different policies on alcohol. Currently, the central government is encouraging deregulation of alcohol production and liberal imports of alcoholic beverages. In addition, foreign companies were recently granted permission to produce alcohol locally and market it under foreign brand names.

Production, distribution and sale of alcoholic beverages, however, are all licensed under excise rules promulgated by each of the state governments, not the central government. As a result, there are significant variations from one state to another. Overall, there is increasing liberalization in alcohol production and availability, except for a few states which have promulgated prohibition.. Prohibition was promulgated in only one state (Gujarat) until the early nineties, although in the last five years other states (Andhra Pradesh, Tamilnadu, Kerala and Haryana) have experimented with partial or complete prohibition. In 1997, Andhra Pradesh repealed its prohibition, with loss of state revenue as a key reason. Haryana, which passed complete prohibition in July 1996, removed it in April 1998.

Most states enforce a few days in the year as "dry" (no alcohol sales) and on other days restrict the time for sale. Shops that sell alcohol may not be within 100 meters of a school/college or a place of worship. Alcoholic beverages are not allowed to be sold to minors (less than 18 years of age) by law, but this is poorly enforced. Alcoholic beverages may have up to 42.8 per cent alcohol, and the package is required to carry a warning regarding the injurious effect of alcohol on health. With no legal quality control checks, the alcohol content of illicit liquor varies, but may exceed 50 per cent alcohol. Price and taxation policies are based on explicit and stated objectives of maximising the government revenues with minimal consideration for public health.

Alcohol beverage advertising is prohibited in print and electronic media and on street hoardings. However, this law is routinely and regularly circumvented by alcohol companies with surrogate advertising. Brand names of alcoholic beverages are often used to market other products (mineral water, soda, playing cards) of sister companies. In addition, satellite television channels from neighbouring countries which have a high viewership advertise Indian alcoholic beverages. Alcohol companies also sponsor sporting events and are permitted to put up large hoardings on site, which are covered by television, providing a convenient and effective advertising medium.

Control of alcohol problems

The maximum BAC permitted when driving is 0.10 g%. Drunk driving is an offence, but few regular checks are carried out, except on holidays or special occasions. Penalties are in the form of fines, but driving licences are not suspended except when a serious crash has been caused. Creating a public nuisance under the influence of alcohol is also a crime and this is more often enforced. Governmental as well as non-governmental organizations periodically take out advertisements describing the harmful effects of alcohol.

Alcohol data collection, research and treatment

No single agency is responsible for collecting alcohol-related data on a national level. The following agencies collect some data, usually incomplete, regarding alcohol: Ministry of Chemicals, Government of India; Ministry of Welfare, Government of India; Department of Excise, Ministry of Finance, Government of India; Indian Distillery Association, NewDelhi; and the All-India Prohibition Council, New Delhi. In addition, the corresponding Ministries at the state level also collect information for their state.

The primary responsibility for preventing and treating alcohol problems at the central government level is with the Ministry of Welfare. Prevention, counselling and some treatment activities are undertaken by non-governmental organizations supported by the Ministry of Welfare. In addition, the Ministry of Health has established De-addiction Centres for medical treatment. The NGOs and the government treatment centres cater to alcohol as well as drug problems, the focus often being on illicit drugs.

In spite of rapid growth of prevention and treatment agencies, they are still very deficient in covering the entire country. Treatment facilities are available to only a small fraction of the individuals needing help. Private treatment facilities are available in bigger cities, but these are too expensive for all but a small minority of people.

In India, residential alcohol treatment is generally provided in psychiatric hospitals, or, less frequently, in general hospitals. More affluent clients may be treated in private general hospitals or "nursing homes". Most non-residential services are run by NGOs. Alcohol treatment is very rarely provided in primary health care settings, though efforts are currently being made to increase involvement from this sector.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from India.

Indonesia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	150 958 000	182 812 000	197 588 000
Adult (15+)	89 045 000	117 578 000	132 398 000
% Urban	22.2	30.6	35.4
% Rural	77.8	69.4	64.6

Health status

Life expectancy at birth, 1990-1995 : 61 (males), 64.5 (females)

Infant mortality rate in 1990-1995 : 58 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 980, PPP estimates of GNP per capita (current int'l \$), 1995: 3800.

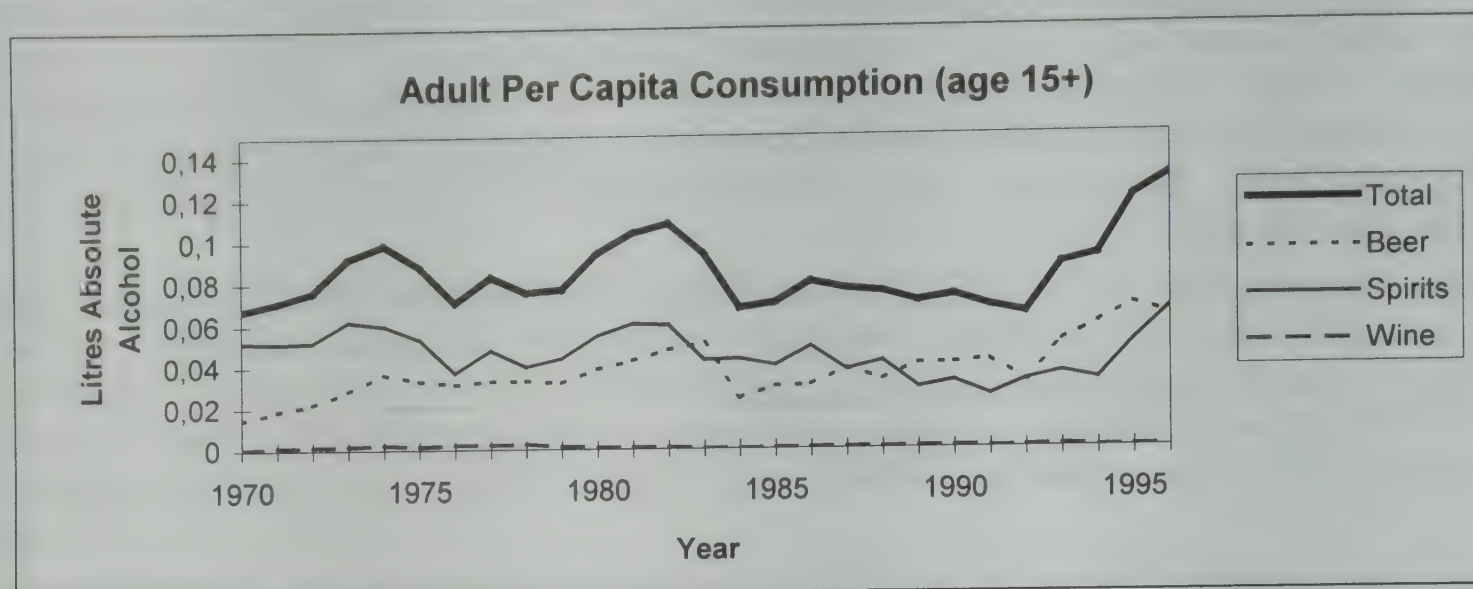
Average distribution of labour force by sector, 1990-1992 : agriculture 56%; industry 14%; services 30%

Adult literacy rate (per cent), 1995 : total 84; male 90; female 78

Alcohol production, trade and industry

Heineken Brewery owns 77.2 per cent of the Multi Bintang Brewery in East Java, which produces and markets Bintang, Tiger and Guinness beer.

Alcohol consumption and prevalence



Consumption

As a predominantly Muslim country, Indonesia reports very low per capita consumption of alcoholic beverages. Non-Muslim groups such as the Balinese drink local products such as palm wine, but this consumption is not recorded. Beer and distilled spirits are the most common beverages in recorded consumption.

Prevalence

Population screening for coronary heart disease risk factors in urban Jakarta in 1990 found that only 2.7 per cent of the population drank alcohol regularly.

Alcohol use among population subgroups

A community survey of drinking patterns in a Balinese village in 1990 showed a relatively high prevalence (approximately 40 per cent) of excessive consumption of locally produced palm wine.

Alcohol policies

Control of alcohol products

The Food and Drug Directorate General in the Ministry of Health controls the production and distribution of alcoholic beverages in the country.

Maldives

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	158 000	216 000	254 000
Adult (15+)	90 000	115 000	138 000
% Urban	22.3	25.9	26.8
% Rural	77.7	74.1	73.2

Health status

Life expectancy at birth, 1990-1995 : 63.4 (males), 60.8 (females)

Infant mortality rate in 1990-1995 : 60 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 990, PPP estimates of GNP per capita (current int'l \$), 1995: 3080

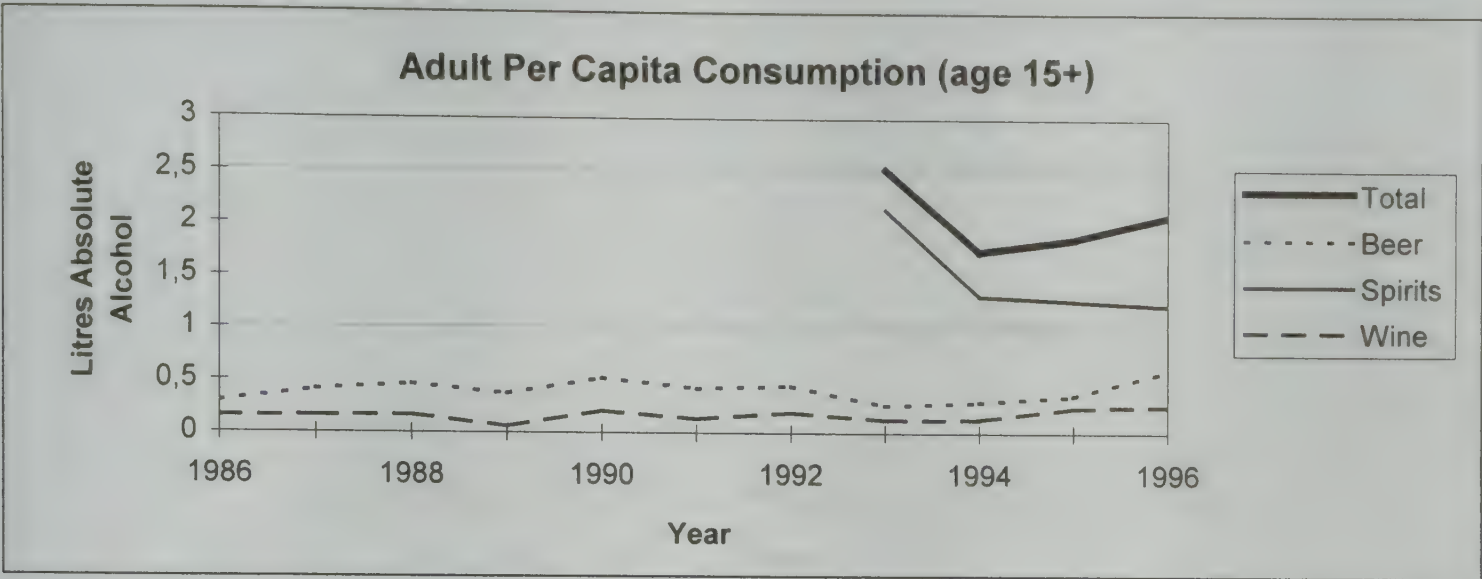
Average distribution of labour force by sector, 1990-1992 : agriculture 25%; industry 32%; services 43%

Adult literacy rate (per cent), 1995 : total 93; male 93; female 93

Alcohol production, trade and industry

Under the country’s Islamic laws, production of alcohol is prohibited.

Alcohol consumption and prevalence



Consumption

Alcohol consumption in Maldives comes entirely from imports, brought into the country for tourist consumption.

Alcohol policies

Control of alcohol products

Consumption of alcohol by citizens is completely prohibited, and strict action is taken if these laws are broken. As a concession to the tourism industry, consumption of imported alcoholic beverages by tourists in specified resorts is permitted.

Myanmar

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	33 821 000	41 813 000	46 527 000
Adult (15+)	20 419 000	25 962 000	29 117 000
% Urban	24	24.8	26.2
% Rural	76	75.3	73.8

Health status

Life expectancy at birth, 1990-1995 : 57.6 (males), 59.3 (females)

Infant mortality rate in 1990-1995 : 84 per 1000 live births

Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 70%; industry 9%; services 21%

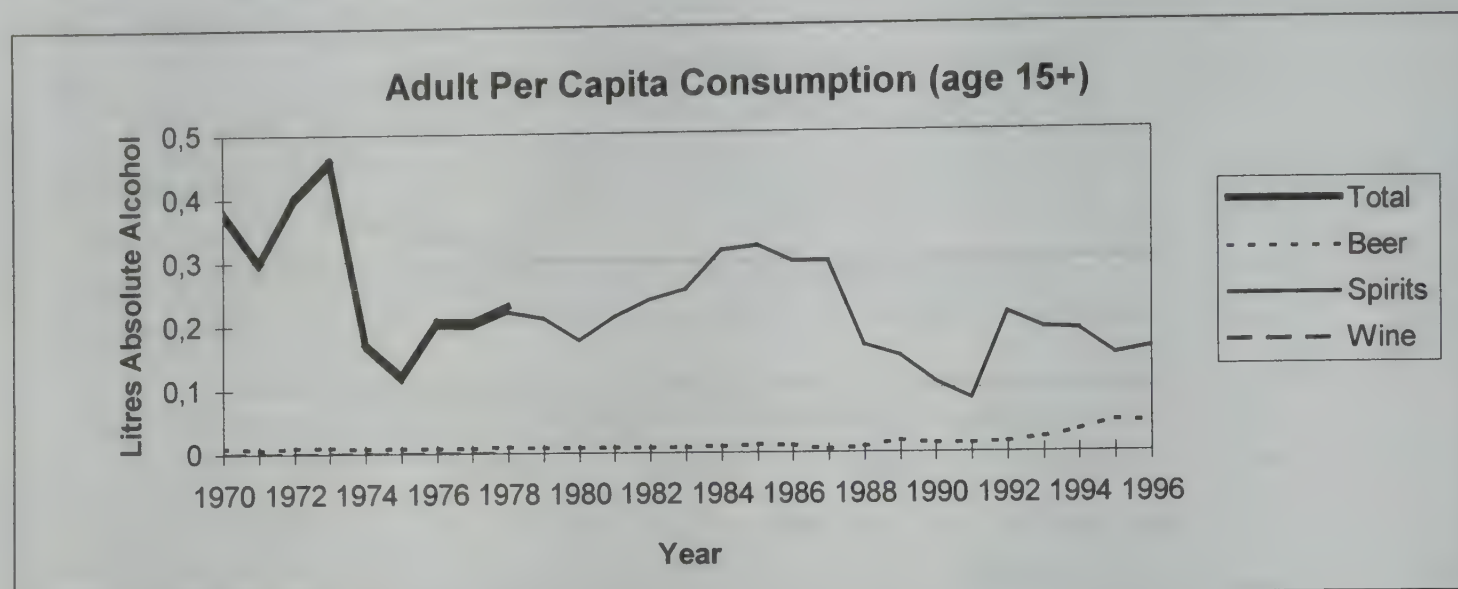
Adult literacy rate (per cent), 1995 : total 83; male 89; female 78

Alcohol production, trade and industry

In 1996, the government of Myanmar banned all imports from the Heineken and Carlsberg and announced it would confiscate any products from those companies found on sale in the country. This action was taken after the two companies withdrew from planned investments in the country,

including cancellation of a new US\$ 30 million Heineken brewery, in response to pressure and a threatened boycott from international human rights groups. At that time Heineken held between 35 and 40 per cent of Myanmar's beer market.

Alcohol consumption and prevalence



Consumption

Recorded adult per capita consumption of alcohol in Myanmar is very low. Distilled spirits are the alcoholic beverage of choice. Beer consumption has risen slightly in recent years. There are no data available on consumption of smuggled or home- or informally-produced alcohol, or on wine consumption after 1978.

Prevalence

A general population survey in 1982 found that eight per cent of the suburban population used alcohol. A repeat of the survey in 1994 revealed an increase in suburban prevalence to 10 per cent.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Hospital statistics from Yangon Psychiatric Hospital show that between 10 and 11 per cent of all inpatients admitted between 1994 and 1996 received a primary diagnosis of alcohol dependence syndrome.

Nepal

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	14 874 000	19 253 000	21 918 000
Adult (15+)	8 392 000	10 983 000	12 625 000
% Urban	6.6	10.9	13.7
% Rural	93.4	89.1	86.3

Health status

Life expectancy at birth, 1990-1995 : 54 (males), 53 (females)

Infant mortality rate in 1990-1995 : 99 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 200, PPP estimates of GNP per capita (current int'l \$), 1995: 1170

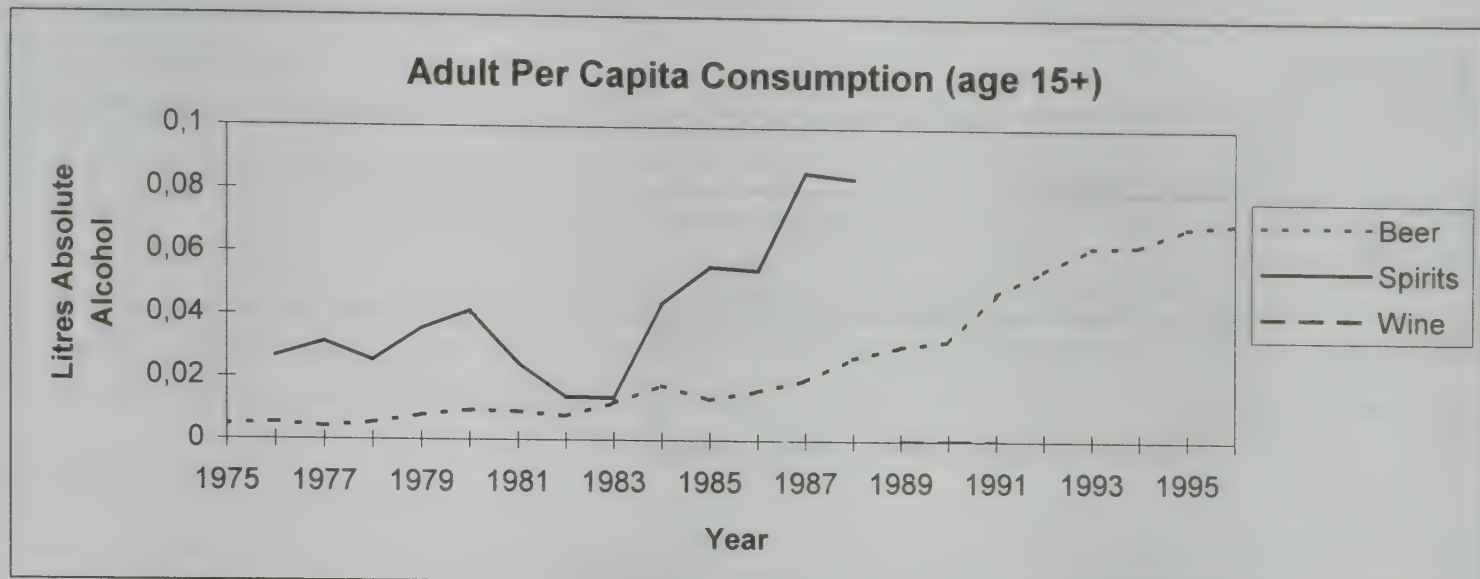
Average distribution of labour force by sector, 1990-1992 : agriculture 93%; industry 1%; services 6%

Adult literacy rate (per cent), 1995 : total 28, male 41, female 14

Alcohol production, trade and industry

There are 36 large distilleries and five large breweries in Nepal.

Alcohol consumption and prevalence



Consumption

There are no data available on consumption of smuggled or home or informally-produced alcohol. Beer and spirits production have been rising. Adult per capita consumption of licensed beer and spirits (excluding home and illegal production) in 1996 was nearly 2.5 litres of pure alcohol. There is a substantial amount of home production of alcohol, and drinking is more common than the per capita figures would indicate. Local distilled spirits include *Raksi*, *Tadi*, *Chyang* and *Tomb*.

Prevalence

Alcohol is considered an integral part of most social occasions among many ethnic groups. Drunkenness among men is frequent and tolerated, but female drunkenness is not.

A *Matwali* is a person allowed to drink alcoholic beverages by virtue of his birth. A high percentage of the population belong to this category, and drink on social occasions or on a regular basis. People not in this category are not supposed to consume alcohol. However, there is reportedly a steady rise in the number of people in the category.

Age patterns

Surveys of school and college students have found that between 3.5 per cent and 25 per cent have consumed alcohol.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

It was reported in 1997 that eight per cent of hospital emergency room cases were alcohol-related, while between two and ten per cent of psychiatric admissions and outpatients had alcohol problems.

Economic impact of alcohol

The government derives between 3.2 and 3.5 per cent of its total revenue from the alcohol industry. In 1996-1997 this totalled 1480 million Nepalese rupees (US\$ 26 million).

Alcohol policies

Control of alcohol products

The Hotel Business and Liquor Sale and Distribution Act (1966) prohibits the sale of liquor to anyone under 16 years of age. The government has no policy designed to curb the production or sale of alcohol. The Liquor Act (1971) requires that anyone producing, selling, importing and exporting liquor obtain a licence to do so, although Clause 7 of this act allows anyone to produce a small amount

of liquor without a licence. There is a 40 per cent sales tax and a 25 per cent income tax on the factory price of total production..

Control of alcohol problems

The Local Administration Act gives power to the local administrator to punish anyone who is publicly intoxicated, but enforcement is poor.

Sri Lanka

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	14 819 000	17 225 000	18 354 000
Adult (15+)	9 591 000	11 556 000	12 723 000
% Urban	21. 6	21. 4	22. 4
% Rural	78. 4	78. 6	77. 6

Health status

Life expectancy at birth, 1990-1995 : 69. 7 (males), 74. 2 (females)

Infant mortality rate in 1990-1995 : 18 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 700, PPP estimates of GNP per capita (current int'l \$), 1995: 3250

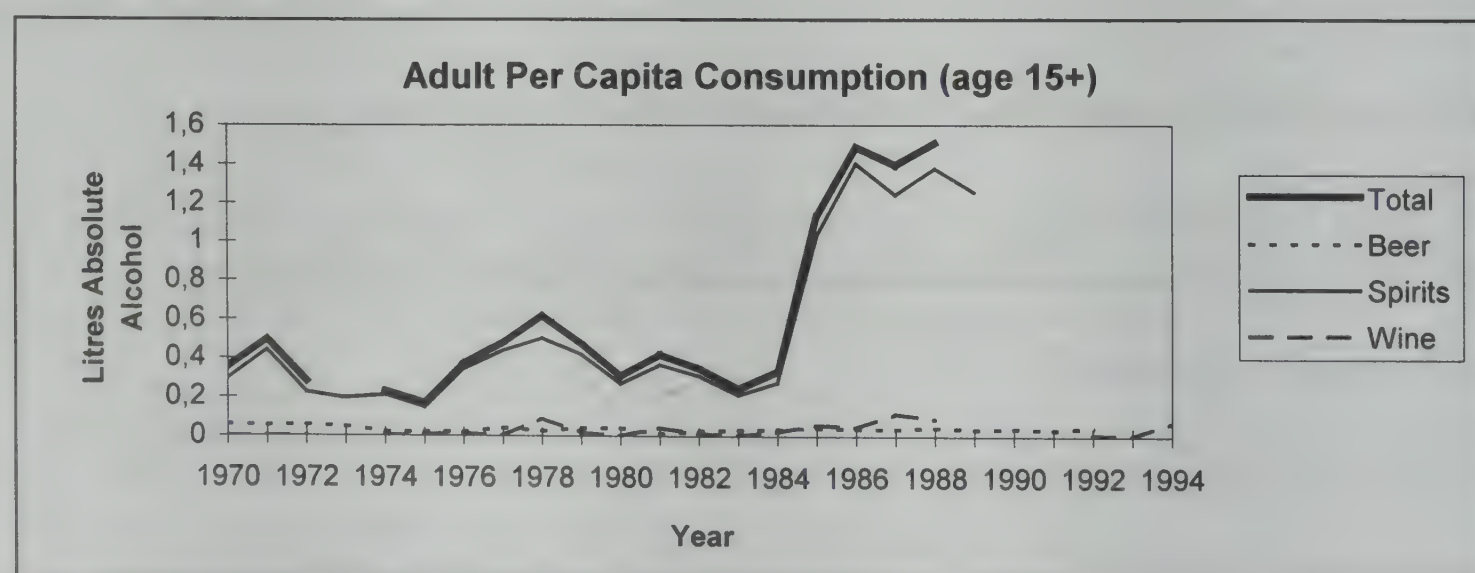
Average distribution of labour force by sector, 1990-1992: agriculture 49%; industry 21%; services 30%

Adult literacy rate (per cent), 1995 : total 90; male 93; female 87

Alcohol production, trade and industry

The largest producer of distilled alcoholic beverages is the State Distilleries Corporation, which was privatized in the early 1990s. This ownership transfer has brought about significant changes in the policy environment. Increasing freedom regarding advertising, production and imports has resulted in a rapidly expanding and increasingly visible alcohol industry.

Alcohol consumption and prevalence



Consumption

The available data on alcohol consumption indicates a steady movement away from fermented beverages such as *toddy*, and towards distilled beverages, in particular *arrack*. High taxes and excise duties have encouraged illicit production. In the above graph, the years 1985 to 1988 are based on figures from the Sri Lankan Excise Commissioner, and represent the most accurate estimate of per

capita consumption for that period: in the range of 1.5 litres of absolute alcohol per capita. Estimated adult per capita of absolute alcohol in 1995, based on production and import figures, rose to 3.2 litres.

Prevalence

A community survey of 8257 adults in seven districts of Sri Lanka found that between 25 and 34 per cent of the respondents had ever used alcohol, and between 20 and 32 per cent were current users. Most drinkers were men, and less than four per cent of women fell into these two categories. Use is higher among poor families; a recent survey found that 42.2 per cent of these families had at least one member who used alcohol.

In the rural areas, those who do drink do so heavily. In 1990 a random sample of alcohol-drinking households in eight villages showed 71 per cent of the 162 respondents to be drinking daily. Ninety-three per cent of the respondents used informally or locally produced alcohol, while only six per cent bought from the formal sector. More than 43 per cent of the respondents had begun drinking between the ages of 16 and 20, and almost 10 per cent began before age 15. Thirty-five per cent had experienced an inability to control drinking, and about 92 per cent reported disapproval from other family members regarding drinking habits.

Age patterns

A 1992 study surveyed 8058 students in six districts between the ages of 12 and 20. Between 19 and 29 per cent had ever used alcohol, and between 3.9 and 17.2 per cent were current users. In four of the districts, more than 70 per cent of males used alcohol at least once a month, usually at parties. More than a quarter of the male users had begun drinking by the age of 11. Most of the users were male.

Economic impact of alcohol

In 1991, according to the Excise Commissioner, 53 per cent of Sri Lankan households reported daily expenditures of 20 rupees (US\$ 0.30) or less on alcohol, almost 18 per cent reported 21 to 30 rupees (US\$ 0.32 to US\$ 0.45), approximately 9 per cent reported 31 to 40 rupees (US\$ 0.47 to US\$ 0.61) and 41 to 50 rupees (US\$ 0.62 to US\$ 0.76) respectively, and more than 10 per cent reported spending 50 rupees (US\$ 0.76) or more.

There is some evidence that poor households tend to spend a greater percentage of their income on alcohol. A 1991 study of the urban poor showed that nearly 30 per cent of the families that used alcohol spent more than 30 per cent of their total expenditure on alcohol. A 1994 survey conducted in six districts found that between 30 and 50 per cent of the income of low-income families was spent on alcohol and tobacco. Yet another study, published in 1997, found that the total expenditure on tobacco and alcohol in a poor community exceeded the amount of government assistance given to the community under the government's poverty alleviation programme.

Alcohol revenue as a proportion of government revenue rose from 3 per cent in 1987 to 3.4 per cent in 1989 and 4 per cent in 1996.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of deaths from alcohol dependence rose from 4 to 38 between 1975 and 1984. It continued to rise, reaching a high point of 76 in 1991, then falling to 42 in 1993, and finally rising again to 63 in 1995.

Between 1990 and 1995, the aggregate rate of alcohol dependence syndrome, alcoholic psychosis and alcohol withdrawal rose from 36.2 per 100 000 population to 57.7 per 100 000.

Mortality

The number of deaths from liver cirrhosis rose from 586 to 2050 between 1983 and 1988. Between 1975 and 1995, the rate per 100 000 population of deaths from chronic liver disease and cirrhosis rose from 42.2 to 55.

Morbidity

Between 1983 and 1988 the number of liver cirrhosis patients went from 5483 to 20 472. In a study of 100 patients with oral cancers, 68 per cent were alcohol users.

Social problems

Between 1990 and 1993, cases of driving under the influence of alcohol rose from 8.9 per 100 000 population to 20.7 per 100 000 population.

The rate per 100 000 population of alcohol-related rape remained steady at 2.1 between 1990 and 1993.

Alcohol policies***Control of alcohol products***

The stated national policy of containing alcohol consumption in the country, which the State Distilleries Corporation attempted to implement by not actively promoting its products, seems to be having little effect on the post-privatization alcohol industry. Alcohol products are now widely promoted by local producers and importers. Alcohol advertising is not permitted on television or radio, but it is freely allowed in the printed media and on billboards.

As of 1993, state taxes and duties constituted approximately 80 per cent of the price of legally produced alcoholic beverages. There has been no significant increase in the price of alcohol during the late 1990s, when compared to cost of living.

Some examples of the liberalization of recent years include: special licences for alcohol sales are freely granted for sporting events; licences previously restricted to hotels with at least 20 rooms are now available to hotels with only five rooms; one individual is now allowed to transport 10 bottles of *arrack* rather than 2 bottles, as was previously allowed; and the legal minimum drinking age was changed from 20 to 18 in 1993.

Control of alcohol problems

In 1993, an attempt was made to formulate a National Alcohol Policy, but it has not yet been implemented or made public. There is no state-sponsored activity regarding the promotion of social or beverage alternatives to alcohol. Public education on alcohol comes mainly from the various NGOs and private temperance organizations. No national level prevention agency has been established but some NGOs are involved with education. The Federation of Non-Governmental Organizations Against Drug Abuse (FONGOADA) coordinates the activities of NGOs.

Alcohol data collection, research and treatment

No national agency collects information regarding alcohol use or problems. However, nongovernmental organizations are involved in prevention and treatment programmes and collect their own individual data.

Several non-governmental organizations have established their own treatment agencies for limited numbers of users. There are no specialized state-sponsored treatment centres for alcohol-related illnesses. There is evidence pointing to a relapse problem among patients treated for dependency, as shown in a study of alcohol-dependent men admitted to a rehabilitation unit. Out of 234 men admitted, 115 relapsed to drinking while 73 remained either totally abstinent or drank infrequently.

Thailand

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	46 718 000	55 583 000	58 791 000
Adult (15+)	28 025 000	37 881 000	42 152 000
% Urban	17	18.7	20
% Rural	83	81.3	79.9

Health status

Life expectancy at birth, 1990-1995 : 66.3 (males), 71.8 (females)

Infant mortality rate in 1990-1995 : 37 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 2740, PPP estimates of GNP per capita (current int'l \$), 1995: 7540

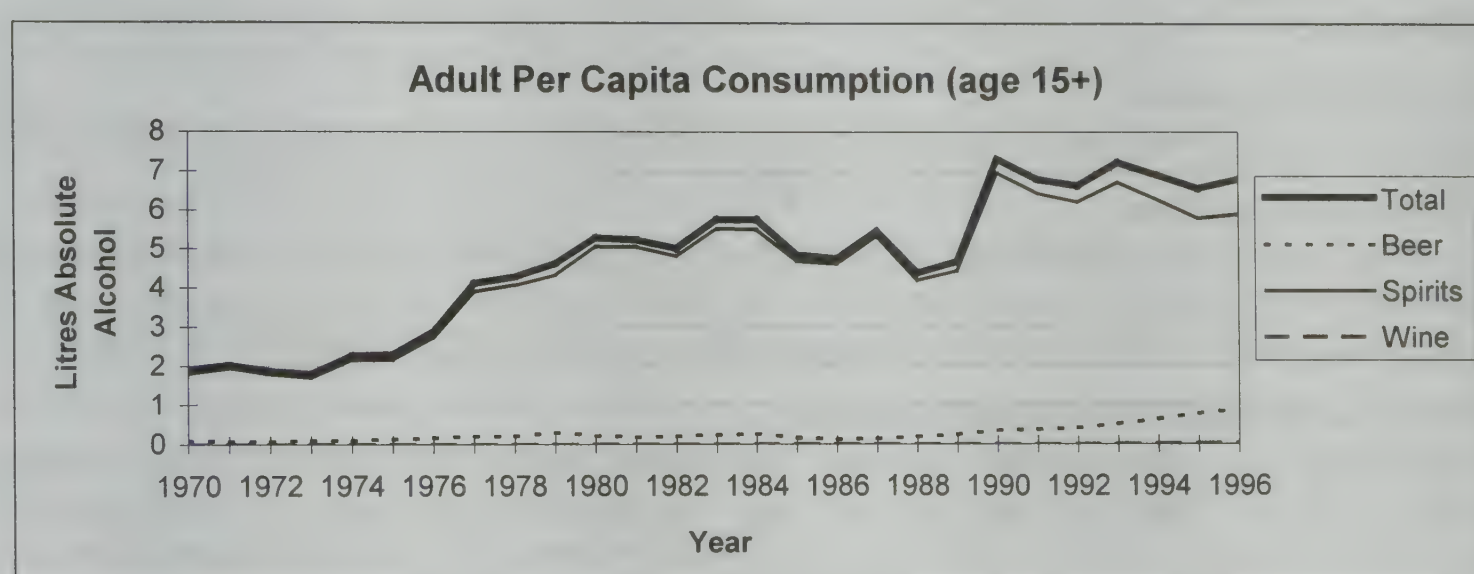
Average distribution of labour force by sector, 1990-1992: agriculture 67%; industry 11%; services 22%

Adult literacy rate (per cent), 1995 : total 94; male 96; female 92

Alcohol production, trade and industry

For 62 years the Boon Rawd Brewery and its Singha label have held 95 per cent of the beer market in Thailand. Boon Rawd's 1995 net worth was estimated at US\$ 1.7 billion. In 1993 Carlsberg Brewery committed more than US\$ 100 million to construct a brewery north of Bangkok, lowering Boon Rawd's market share ten points. Recently, Heineken, Miller and Anheuser-Busch Breweries have entered the market as well. Carlsberg, which entered the market in 1992 and now sells 20 per cent of Thailand's beer, has two breweries that are joint ventures with the Danish Industrialization Fund for Developing Countries and other Thai interests.

Alcohol consumption and prevalence



Consumption

Figures provided by the Ministry of Finance for spirits consumption from 1988 to 1996, shown above, are slightly lower than those provided by the FAO. Both series, however, show that recorded alcohol consumption is rising, fuelled primarily by a rise in spirits consumption. Wine consumption is too low to show on the graph. There is no information available regarding consumption of smuggled or home- or informally-produced alcohol.

Prevalence

A national survey by the National Statistical Office in 1991 found that 31.4 per cent of all adults had consumed alcohol. Daily drinkers made up 2.22 per cent of the population in 1996.

Age patterns

In a sample of 564 juvenile delinquent boys in Metta, Muthita, Karuna and Ubekkha Homes and 123 juvenile delinquent girls in Pranee Home, regular drinking of alcohol by the father was reported by 60 per cent and 26 per cent respectively. One third of the sample reported ever drinking alcohol, and "liquor dependence" was reported by five per cent of boys. The age of the sample ranged from 8 to 24 years.

Economic impact of alcohol

Household expenditure on alcohol in Thailand increased from 1.2 per cent to 2.5 per cent of total expenditure between 1986 and 1992.

Mortality, morbidity, health and social problems from alcohol use

Mortality

According to the Institute of Forensic Medicine, more than 62 per cent of traffic crash victims registered blood alcohol concentrations at higher than safe levels.

Morbidity

A 1989 study established duration of alcohol intake as a significant risk factor in the development of hypertension in urban slum and government apartment dwellers. A 1990 case-control study on risk factors for oesophageal cancer in Southern Thailand revealed the relative risk for alcohol drinking to be 4.7. However, a 1992 case control study of naso-pharyngeal carcinoma in Northeast Thailand found drinking alcohol not to be a significant relative risk.

Social problems

Questionnaires were administered to 2099 accident admissions to the emergency unit at the Police Hospital in Bangkok. Of this group, 1255 were drivers and 844 were passengers and pedestrians. The majority (96.6 per cent) of the drivers were male, and 91.2 per cent were 39 years of age or younger. Results showed that 28.8 per cent of the drivers had a positive BAC.

Alcohol policies

Control of alcohol products

Alcohol advertising is prohibited on television. The legal minimum age for buying alcohol is 17.

Control of alcohol problems

There is no national agency responsible for alcohol policy. The national agencies which are concerned with education and prevention regarding alcohol are the Department of Health and the Drug Abuse Prevention and Treatment Division of the Bangkok Metropolitan Administration.

Alcohol data collection, research and treatment

Many prevention and treatment programmes are carried out at Thanyarak Hospital, under the supervision of the Department of Medical Services, Ministry of Public Health. Other hospitals in the Ministry of Public Health provide alcohol prevention and treatment programmes on a smaller scale.

Western Pacific Region

Australia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	14 569 000	16 888 000	18 088 000
Adult (15+)	10 887 000	13 188 000	14 190 000
% Urban	85.8	85.1	84.7
% Rural	14.2	14.9	15.3

Health status

Life expectancy at birth, 1990-1995 : 74.7 (males), 80.6 (females)
Infant mortality rate in 1990-1995 : 7 per 1000 live births

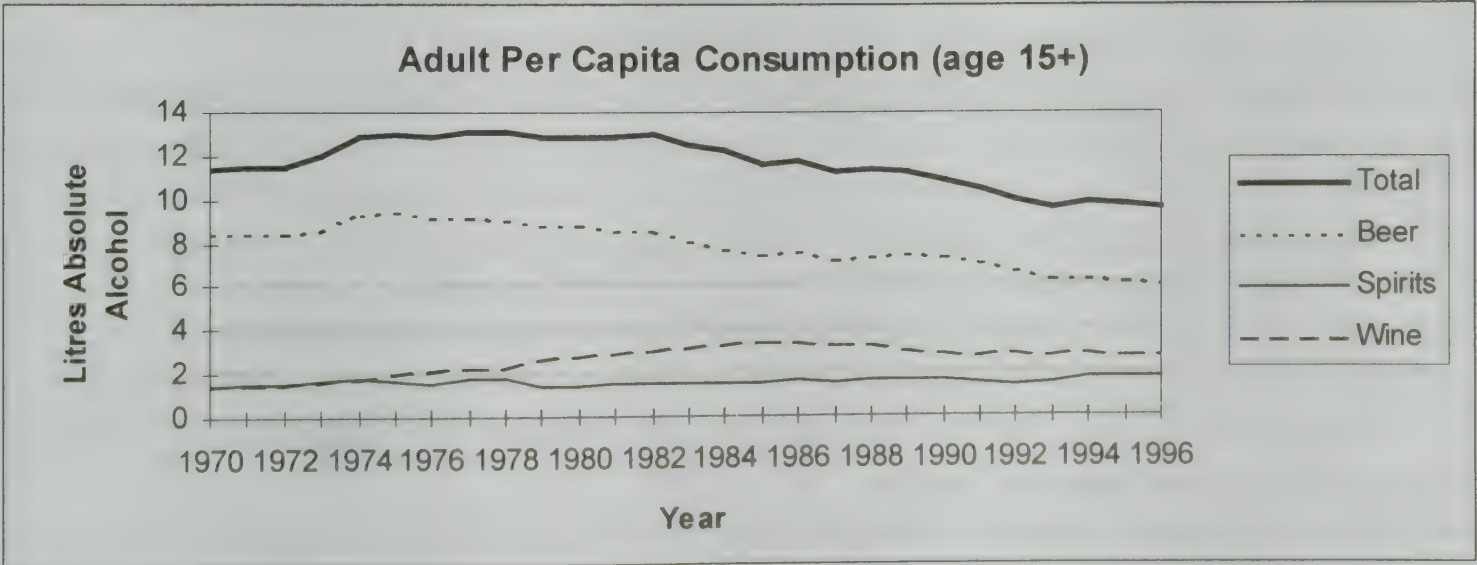
Socioeconomic situation

GNP per capita (US\$), 1995 : 18 720, PPP estimate of GNP per capita (current int'l \$) : 18 940
Average distribution of labour force by sector, 1990-1992 : agriculture 6%; industry 24%; services 70%
Adult literacy rate (per cent), 1995 : more than 95

Alcohol production, trade and industry

Australia's Foster's Brewing Group is the ninth largest brewer in the world. Seventy per cent of Foster's US\$3 601 million total sales in 1995 were outside of Australia. Other leading breweries and wineries include: Castlemaine XXXX (owned by New Zealand's Lion Nathan), Lindemans Wines, Bundaberg Brewed Drinks Ltd. and Orlando Winery.

Alcohol consumption and prevalence



Consumption

Beer is the alcoholic beverage of choice among Australians, although there is substantial wine and spirits consumption as well.

Prevalence

The 1995 national household survey estimated from 3850 interviews that 76 per cent of the population, aged 14 years or more, were current drinkers, with more than half of these drinking at least weekly. This shows very little change since 1993 when 73 per cent of the population were current drinkers and 45 per cent drank at least weekly. Two thirds of current drinkers reported that they usually drink at low risk levels (no more than 20 grams or less for females or 40 grams or less for males). Again, there is little difference since 1993 on this measure. In the 1995 survey, less than a third of current drinkers had never exceeded the low risk levels over the past year, an improvement compared to 1993.

Age Patterns

The 1995 National Household Survey found that males aged 14 to 24 years and females aged 20 to 24 years were more likely to drink to excess than males and females in any other age groups. In 1989, the National Heart Foundation reported that 12 per cent of male drinkers between the ages of 20 and 24 drank nine drinks or more on a drinking day, compared to only 3 per cent of men over 45 years of age. Twenty per cent of women aged 20 to 24 years drank five or more drinks per drinking day, compared to two per cent of women over 50.

In 1997, the University of Queensland Psychology Department conducted a study of 2000 Queensland high school students between Years 8 (13 to 14 years of age) and 11 (16 to 17 years of age). The study found that boys were drinking double the amount of alcohol as girls by the time they reached Year 11, despite consuming equal amounts in Year 8.

A 1992 questionnaire among 9513 students in Years 7 to 11 (12 to 17 years of age) at 126 schools in Victoria showed that 24 per cent of Year 7 students had used alcohol in the last month, as opposed to 71 per cent in Year 11. Males in Year 11 used alcohol most frequently, with 52 per cent describing themselves as weekly users, compared with 12 per cent of males in Year 7. Binge drinking is more common among young people than at older age groups. In a 1989 survey of 10 000 secondary students in Victoria, 35 per cent of seniors stated that they usually drank at least five drinks per drinking occasion, and 9 per cent had consumed five or more drinks more than once in the previous two weeks. Sixty per cent of those in Year 7 (the youngest level) had never consumed alcohol as opposed to 44 per cent in a 1985 survey.

The only available national survey of young drinkers surveyed young people in school Years 7 through 12 in 1990. At age 12, 8 per cent of girls and 13 per cent of boys had had at least one drink in the past week. By age 17, 51 per cent of boys and 46 per cent of girls were drinking weekly. Among the 17 year olds, boys averaged 8.9 drinks per week, and girls 5.7 drinks per week.

Drinking among young people appears to have declined in the 1980s. Among secondary school students, a 1989 survey of students in New South Wales (NSW) aged 12 to 16 years found that 22 per cent of males drank weekly, and 26 per cent had consumed five or more drinks in a row at least once in the previous fortnight. This compared to 34 per cent weekly consumption and 27 per cent binge drinking in 1983. Eighteen per cent of girls drank weekly and 15 per cent were binge drinkers, down from 32 per cent weekly drinkers and 24 per cent binge drinkers in 1983.

A 1992 questionnaire among 9513 students in Years 7 to 11 of 126 schools in Victoria showed that 24 per cent of Year 7 students had used alcohol in the last month, as opposed to 71 per cent in Year 11. Males in Year 11 used alcohol most frequently, with 52 per cent describing themselves as weekly users, compared with 12 per cent of males in Year 7. Binge drinking is more common among young people than at older age groups. In a 1989 survey of 10 000 secondary students in Victoria, 35 per cent of seniors stated that they usually drank at least five drinks per drinking occasion, and 9 per cent had consumed five or more drinks more than once in the previous two weeks. Sixty per cent of those in Year 7 (the youngest level) had never consumed alcohol as opposed to 44 per cent in a 1985 survey.

Alcohol use among population subgroups

In 1992, of 516 randomly selected Aboriginal men and women over the age of 15 years from the Kimberley region of Western Australia, 52 per cent (67 per cent of men and 38 per cent of women) were drinkers. Of the drinkers, 85 per cent were drinking above the level defined by the National Health and Medical Research Council as harmful. Young men were the group most likely to drink heavily, although the amount of consumption in both sexes decreased with age.

Economic impact of alcohol

During 1993-1994 Australian households spent a weekly average of \$A 3.76 (US\$ 2.92) on wine, \$A 9.29 (US\$ 7.21) on beer and \$A 3.13 (US\$ 2.43) on spirits, for a total weekly expenditure of \$A 16.18 (US\$ 12.56), 2.9 per cent of annual household income. From 1988-1989 to 1993-1994 there was a 22 per cent increase in weekly expenditure on wine, compared with a 5 per cent over the same period in beer expenditure.

The economic cost of alcohol abuse was estimated to have been \$A 4490 million (US\$ 3087 million) in 1992, which represents approximately 24 per cent of all costs for all drug abuse. Adjusting for inflation, this represents a 0.8 per cent increase between 1988 and 1992. However, there were improvements in data collection, which may account for some or most of this increase. Approximately three per cent of respondents age 14 and over missed at least one day of work or study in the three months prior to the 1995 national household survey due to alcohol.

According to a 1997 report, the alcohol industry generates an estimated \$A 3800 million (US\$ 3024) in revenues for the government annually.

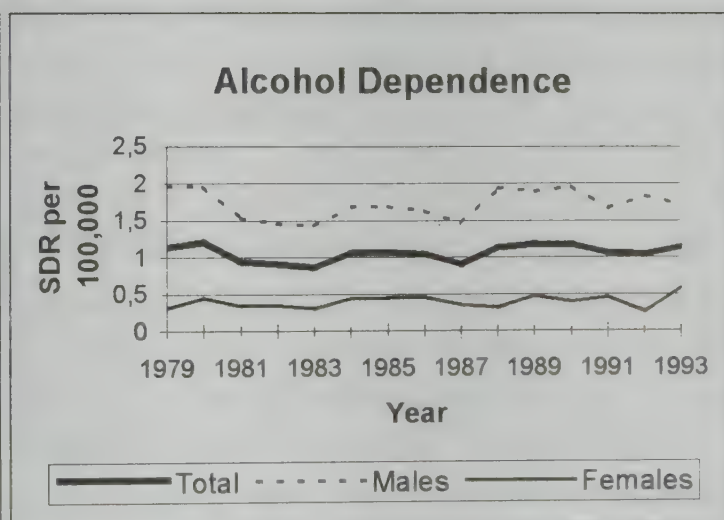
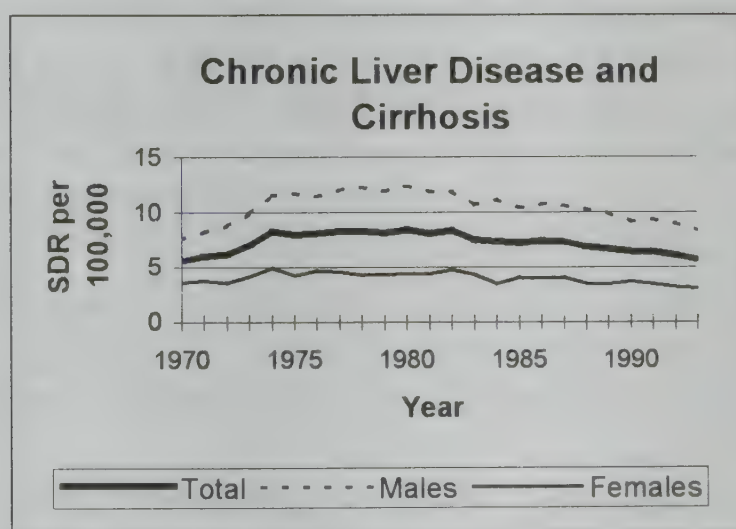
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A 1998 report found that 10 per cent of 18 to 24 year olds had an alcohol use disorder. In a 1994 general population survey of 1272 persons aged 16 years or older in the Perth metropolitan area, one per cent of the respondents showed signs of alcohol dependence syndrome.

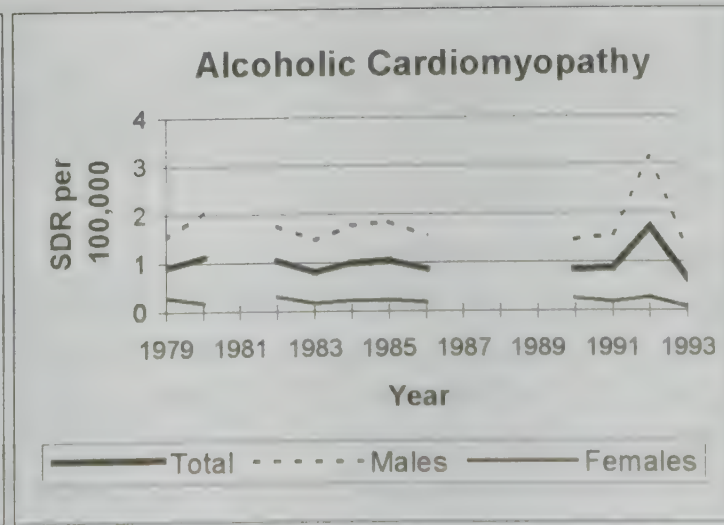
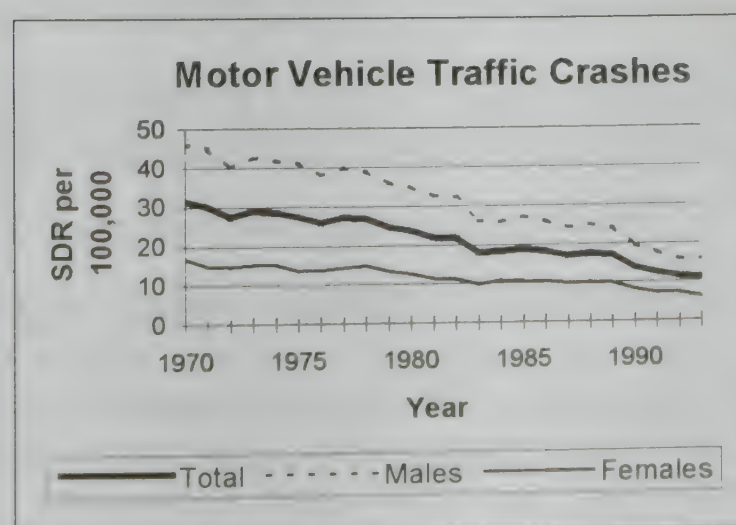
Mortality

The total number of deaths caused by the hazardous or harmful use of alcohol in 1992 was 2521, which represented three per cent of all deaths. In 1995, 30 per cent of all fatally injured drivers or motorcyclists who had been tested registered a BAC of 0.05 g% or more. Among those at this limit, 70 per cent had a BAC of 0.15 g% or higher.



Morbidity

In 1990, 33 per cent of motor vehicle crashes were alcohol-related, down from 44 per cent in 1981.



Social problems

In 1998, more than 50 per cent of adult Australians reported having been the victim of alcohol-related abuse or violence in the last 12 months. A random sample of 1186 men and women over the age of 14 years was selected throughout every metropolitan and provincial area of Australia between 12th August and 21st August, 1998. Twenty-eight per cent of males and seven per cent of females said they had been involved in a physical confrontation or fight while under the influence of alcohol. The rate of alcohol-related confrontations or fights was 41 per cent for males under 34 years, compared with 20 per cent for males 35 years and over. In 1995, almost 1 in 10 (nine per cent) of Australians suffered alcohol-related physical assaults. Males were much more likely than females (12 per cent versus 3 per cent) to have been victims of such assaults.

A 1994 police report listed alcohol consumption as a "vulnerability factor" in 17 per cent of all domestic violence incidents. A NSW study found that 40 per cent of domestic violence cases reported to the police were directly related to alcohol misuse.

The NSW Bureau of Crime Statistics and Research undertook a comprehensive assessment of all cases of domestic assault that were handled by 22 courthouses throughout the state between mid April and late June, 1975. In the victims' statements, nearly 60 per cent of the attackers had been drinking before the assault, and in 14.5 per cent of the cases the complainant had also been drinking.

Alcohol policies***Control of alcohol products***

An excise duty is levied on beer in excess of 1.15 per cent alcohol by volume, and on most spirits. The wine industry is exempt from duty. Since 1984 wholesale beer price increases have been subject to approval by the Prices Surveillance Authority, a federal government agency. Brewers are required to substantiate their requests for price increases. The price of designer alcoholic drinks is set to increase after federal moves to close a tax loophole. The government presented legislation which changes the definition of "spirits" to ensure that designer drinks were taxed at the same rate as spirits. Drinks with up to five per cent alcohol content will be taxed at the beer rate of \$A 15.89 (US\$ 11.75) per litre of alcohol, and drinks above that will be taxed at the spirit rate of \$A 36.99 (US\$ 27.35) per litre of alcohol. Popular youth market drinks such as Sub Zero, Two Dogs, Vault, Stinger, E-33, XLR8 and DNA are likely to be subject to higher excise taxes which could lead to a price increase of around \$A 0.70 (US\$ 0.52) a bottle. Manufacturers are expected to reduce the alcohol strength to avoid higher excise charges but this could still mean a price rise of about \$A 0.30 (US\$ 0.22).

In each state and territory, a Licensing Court or Licensing Commission administers licensing laws. Throughout most of the country, sales are restricted to defined licensing hours. There are no state monopolies for the manufacturing or sale of alcoholic beverages. Legislation prohibits the sale of alcohol to those under 18 years of age in all states.

In September, 1998, the NSW State government approved a new system of liquor licences which will end the ban on "winning without dining", allowing restaurants to serve drinks to customers who do not wish to eat. NSW is the last State to abandon pre-war protectionist liquor regulations that make it illegal for restaurant patrons to consume alcohol while standing up. In Victoria, liquor laws were liberalised in 1987, with restaurants allowed to set aside 25 per cent of their area for drinks. In Queensland, the laws changed in 1992, allowing 20 per cent of patrons to buy drinks without dining. In South Australia there are no limits.

The Alcoholic Beverages Advertising Code Council which operated as part of the Media Council is now defunct. There are no controls on advertising and there is no avenue for community complaint other than to the industry directly.

Control of alcohol problems

In 1985, federal, state and territorial governments began a National Campaign Against Drug Abuse under the Ministerial Council on Drug Strategy, which was composed of ministers responsible for health and law enforcement at all three levels of government. The federal government issued a National Health Policy on alcohol in 1989. A National Alcohol Action Plan guided alcohol policy in the early 1990s. A National Drug Strategy, including alcohol, was in effect from 1993 to 1997.

The maximum BAC is 0.05 g% for car drivers, 0.00 g% for drivers of heavy, dangerous goods and public transport vehicles and 0.00 g% for learners and drivers under 25 years of age for three years following receipt of driving licence. Legislation permits random alcohol breath testing of drivers by police. Penalties (fines, imprisonment or licence suspension) vary in severity according to alcohol levels and previous drink-driving convictions. The National Campaign Against Drug Abuse aims at reducing drug-related harm to the community by public education and research.

The Queensland Liquor Act of 1992 states that a person may be subject to a prohibition order if it appears to a Council that a person endangers, or is likely to endanger, the life, safety or well-being of the person's family or another person in the community. A prohibition order can remain in effect for up to one year.

Alcohol data collection, research and treatment

The Australian Bureau of Statistics collects data on alcohol production and consumption. The Commonwealth Department of Health and Family Services commissions the national household survey every two years. The Australian Institute of Health and Welfare produces statistics on morbidity and mortality. The Federal Office of Road Safety produces statistical summaries of fatal road crashes and road fatalities.

There are three national research centres dealing with alcohol: the National Drug and Alcohol Research Centre concentrates on treatment research, the National Centre for the Prevention of Drug Abuse researches prevention issues, and the National Centre for Education and Training on Addiction researches and develops alcohol and drug education and training in collaboration with other organizations.

In 1981, the Australian Medical and Professional Society on Alcohol and Drug-Related Problems was established to provide postgraduate training in alcohol problems to medical practitioners. Recognition that specialist treatment agencies are not sufficient to meet demands for alcohol services has led to increased emphasis on developing the skills and resources of generalist services in communities.

Brunei Darussalam

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	193 000	257 000	285 000
Adult (15+)	120 000	164 000	191 000
% Urban	59.9	57.8	57.8
% Rural	40.1	42.3	42.2

Health status

Life expectancy at birth, 1990-1995 : 72.5 (males), 76.3 (females)

Infant mortality rate in 1990-1995 : 8 per 1000 live births

Socioeconomic situation

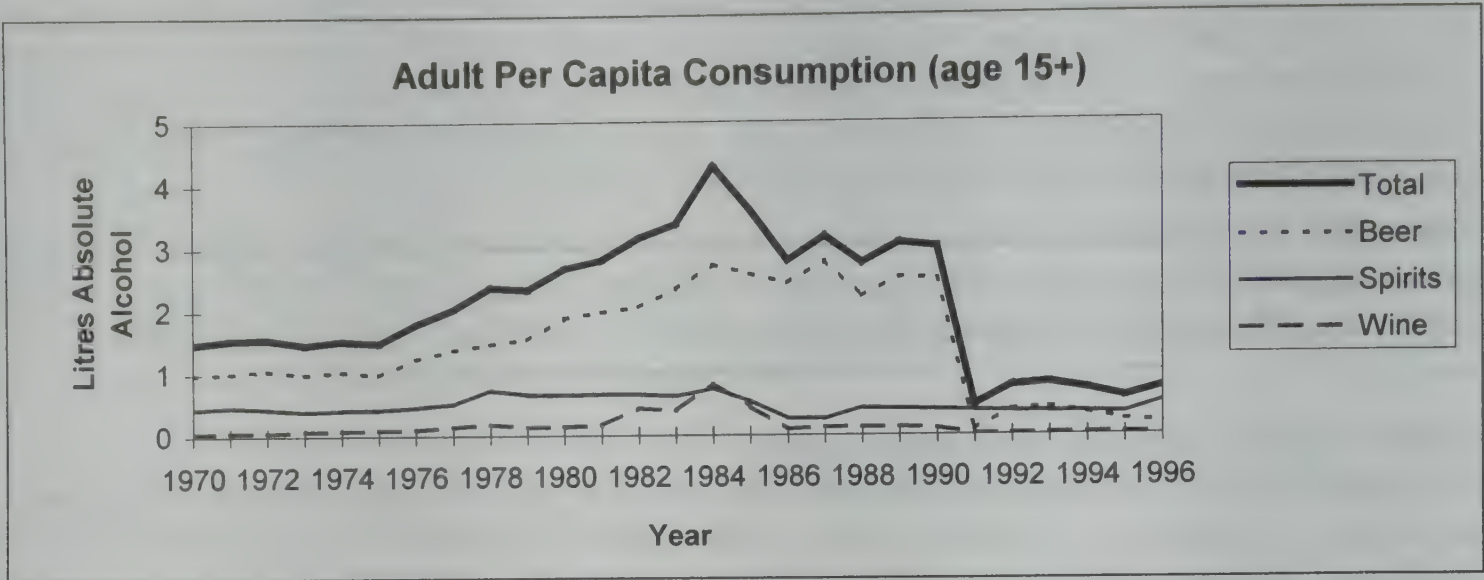
Average distribution of labour force by sector, 1990-1992 : agriculture 0%; industry 0%; services 0%

Adult literacy rate (per cent), 1995 : total 88; male 93; female 83

Alcohol production, trade and industry

Brunei Darussalam does not produce alcoholic beverages for commercial sale.

Alcohol consumption and prevalence



Consumption

Imported beer and spirits are the alcoholic beverages of choice in Brunei Darussalam. There is no information available regarding consumption of smuggled or informally- or home-produced alcoholic beverages.

Cambodia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	6 498 000	8 841 000	10 251 000
Adult (15+)	3 626 000	5 074 000	5 644 000
% Urban	12.4	17.6	20.7
% Rural	87.6	82.4	79.3

Health status

Life expectancy at birth, 1990-1995 : 50.1 (males), 52.9 (females)

Infant mortality rate in 1990-1995 : 116 per 1000 live births

Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 74%; industry 7%; services 19%

Adult literacy rate (per cent), 1995 : 65

Alcohol production, trade and industry

In 1991 the Singapore-based Cambrew Brewery signed an agreement with the Cambodian government allowing Cambrew to refurbish an abandoned brewery in Kompong Som, providing the first domestic beer production in more than 15 years. The brewery acquired its malt and hops from the Interbrew company. In 1996, Wente Vineyards formed an alliance with United Distributors of Cambodia to import wine products into Cambodia.

Alcohol consumption and prevalence

Consumption

In the early 1970s, spirits was the leading alcoholic beverage in Cambodia. There is very little recent information available about alcohol production and consumption in Cambodia.

China

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	998 877 000	1 155 305 000	1 221 462 000
Adult (15+)	644 244 000	837 940 000	898 953 000
% Urban	19.6	26.2	30.3
% Rural	80.4	73.8	69.8

Health status

Life expectancy at birth, 1990 : 66.9 (males), 70.5 (females)

Infant mortality rate in 1994 : 33 per 1000 live births

Socioeconomic situation

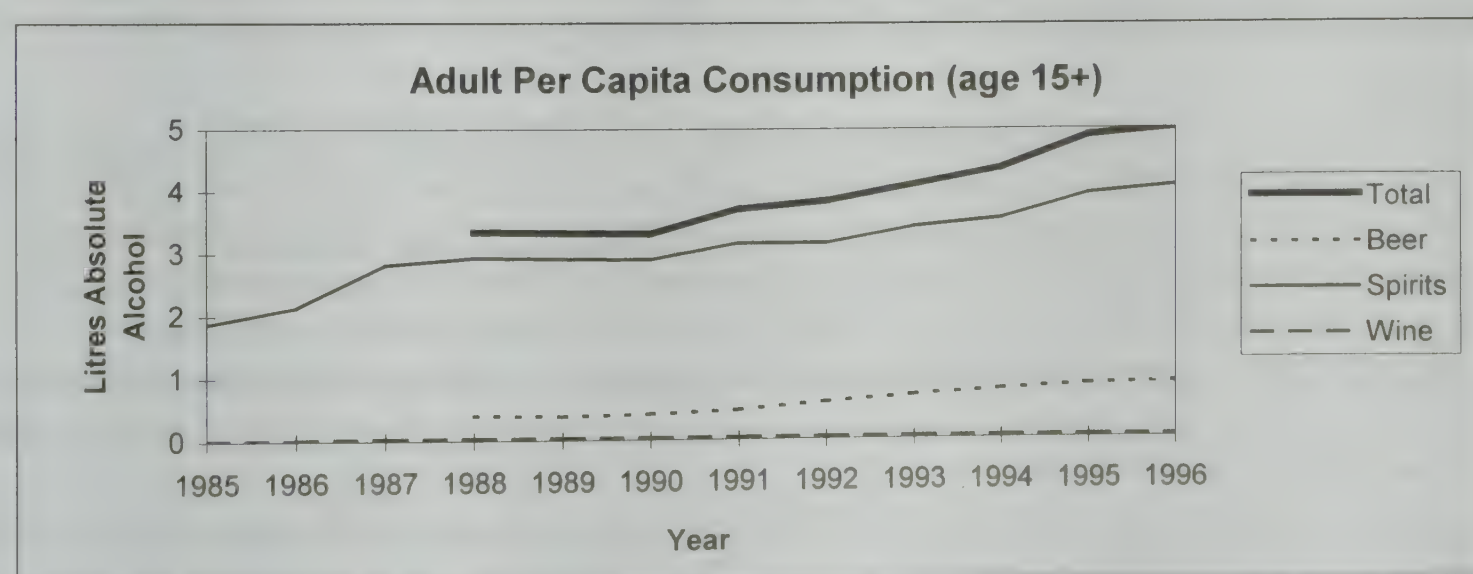
Average distribution of labour force by sector, 1990-1992 : agriculture 73%; industry 14%; services 13%

Adult literacy rate (per cent), 1995 : total 82; male 90; female 73

Alcohol production, trade and industry

During the four year period between 1977 and 1980, the Chinese government opened the country's economy to foreign trade and investment. Under the guidance of the Chinese Ministries of Light Industry, Commerce, Machinery and Metallurgy and National Defence, breweries were built in almost every province and autonomous region in China, with the exception of Tibet. By 1981, beer output was 91 times the figure produced in 1949. Since 1981, the beer industry has skyrocketed, with the help of the Chinese government, which invested approximately US\$ 800 million in the technology of the country's brewing industry. China is identified as the fastest growing beer market in the world, and is considered ripe for investment. In the late 1990s, alcohol company joint ventures in China number above 50, and include companies such as Anheuser-Busch, Miller, Heineken, Asahi, Kirin, Foster's, San Miguel, Interbrew and Pabst. In terms of gross amounts, China is currently the second largest consumer of beer in the world and the fifth largest consumer of cognac, and is expected to surpass the United States in beer consumption sometime early in the next century. No one brewer appears to have significant control of the market; Tsingtao, the country's largest brewer, had only a 2.3 per cent share of 1993's production.

Alcohol consumption and prevalence



Consumption

The above estimates from international sources are higher than those using figures taken directly from the Chinese Bureau of Statistics. Calculating from the amount of alcoholic beverages purchased per

capita in 1995 in cities and towns yields an estimate of 2.7 litres of absolute alcohol per adult (15 years and over). A survey of consumption in five cities found average per capita consumption to be 3.62 litres. Rural consumption of alcoholic beverages is 6.53 litres per capita, but this does not reflect pure alcohol, and the proportion of different alcoholic beverages included in this figure is unavailable.

Spirits are the most commonly used alcoholic beverage in China. Beer consumption has also been rising steadily during the 1990s. Home made alcoholic beverages, with alcohol content ranging from 10 to 18 per cent absolute alcohol, are popular in the rural areas in southern China.

Prevalence

Alcohol consumption varies by region. However, throughout the country women tend to drink much less alcohol than men. Recent surveys of drinking in five cities found a range of annual adult per capita consumption between 2.22 and 5.49 litres of absolute alcohol. A 1993 study gathered data on more than 14 000 respondents between the ages of 15 and 65 in rural and urban areas of Hunan, Heilongjiang and Jiangsu provinces. Drinking rates ranged from 58.3 to 82.6 per cent for men, and 0.1 to 20.5 per cent for women. Most of the drinkers were light drinkers. A study of foreign Chinese students found that those from Hong Kong or Taiwan drank more than those from mainland China, suggesting the influence of Chinese culture on alcohol consumption.

By cluster sampling, 26 121 community household residents (18 to 65 years old) were assessed with data collected by trained psychiatrists using structured questionnaires. The statistics were based on two dimensions: gender and different populations (general population versus specific population, this being individuals with specific occupations which may link with drinking such as miners, heavy manual labourers, workers in wineries, etc). The male, female and total drinking rates were 87.3 per cent, 31.5 per cent and 61.1 per cent in the general population, respectively. In this study, a "drinker" is a respondent who reported consumption of any alcohol in the 12 months preceding the interview. Overall, male drinking rates and frequency were higher than those of females, and many more drinkers in the specific population than in the general population were frequent users of alcoholic beverages. More than half of the male drinkers and almost all of the female drinkers used alcohol once a week or less. More than 10 per cent of male drinkers and approximately one per cent of female drinkers drank once a day or more. The males reported a greater amount of alcohol consumed per session, and participants in the specific population reported heavier drinking than those in the general population.

In these same studies, the per capita consumption of pure alcohol per year was 3.62 litres in the general population and 6.13 litres in the specific population, with males consuming 17.7 and 12.9 times more alcohol than females in the general and specific populations respectively. Generally, males had notably higher rates of alcohol-related problems than females. The male, female and total alcohol dependence rates in the general population were 6.2 per cent, 0.04 per cent, and 3.2 per cent respectively. In the specific population, rates were 10 per cent, 2.2 per cent and 7.4 per cent for males, females and total, respectively. High risk factors for alcohol dependence were: males aged 41 to 51, Korean nationality, smokers, divorced or separated marital status, low education level and some specific occupations.

Age patterns

A study of alcohol use among sixth, eighth and tenth grade adolescents (spanning the ages roughly from 11 to 16) found that by 10th grade, more than 80 per cent of the students had tried alcohol. A large percentage began using alcohol prior to sixth grade (age 11 or 12). Alcohol use increased with age. More males reported use than females in every category. Sixty-three per cent of the students had tried beer, 54 per cent had drunk wine, and 11 per cent had consumed distilled spirits.

Questionnaires about alcohol use administered to a sample of 190 students at two universities in Nanning revealed that men consumed more and were more likely to report alcohol-related problems than women. Beer was the alcoholic beverage of choice for both genders.

A study of 18 244 men between the ages of 45 and 64 conducted between 1986 and 1989 in four small communities in Shanghai found that 57 per cent had never drunk alcohol regularly, 41 per cent currently drank, and two per cent were former drinkers. Among the drinkers, 45 per cent drank beer, 56 per cent drank wine, and 48 per cent drank spirits.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

As the table below shows, studies conducted nationally and regionally since 1982 have found rising prevalence of alcohol-related disorders. The vast majority of those diagnosed with alcohol dependence are male. A 1989 nationwide epidemiological survey of 44 920 participants found that 5.7 per cent of men, 0.01 per cent of women and 3.7 per cent of the entire sample were alcohol dependent. A nationwide survey in 1993 sampled more than 14 000 people in urban and rural areas in Heilongjiang, Hunan and Jiangsu provinces. Alcohol dependence rates ranged from 1.4 per cent to 6.5 per cent. The percentage of patients discharged from 17 psychiatric hospitals with a diagnosis of an alcohol disorder grew from 1.8 per cent in 1991 to 2.2 per cent in 1993.

YEAR	AREA	N	TOTAL ALCOHOL-RELATED DISORDERS	CRITERIA
1982	National	38 136	0.0184	ICD-9
1984	Shandong	88 822	0.0360	ICD-9
1985	Chongqin	3 700	0.4550	ICD-9
1986	Hubei	4 968	0.4227	ICD-9
1987	Henan	5 550	0.7636	ICD-9
1989	National	44 920	3.7267	ICD-10
1990	Jiangsu	13 892	2.3632	ICD-10
1993	Hunan	2 029	1.38	DSM-III-R
1993	Heilongjiang	5 993	4.2883	DSM-III-R
1993	Jiangsu	6 012	6.5036	DSM-III-R

Mortality

A prospective study of 18 244 men aged 45 to 64 years in Shanghai found that the relative risk of death among those drinking 14 or fewer drinks per week was 0.8 per cent, while those drinking 43 or more drinks a week had a 30 per cent excess risk of death. Biographical reconstructive interviews conducted for 116 consecutive suicides in Taiwan found that the most prevalent precursor mental illnesses were depression and alcohol dependence.

Morbidity

Alcoholic cirrhosis was present in about five per cent of all liver cirrhosis cases in 1993. Case control studies have found significant relationships between alcohol use and oral cancer, hypertension, stomach cancer (mainly with spirits consumption), and oesophageal cancer, after controlling for other factors including smoking.

Social problems

A 1992 study examining 1674 patients diagnosed with alcohol dependence, found that 11.2 per cent had a history of family violence, 1.1 per cent had been divorced, 7.4 per cent reported cautions and arrests for public drunkenness and 25.5 per cent reported alcohol-related absenteeism and accidents at work.

Alcohol policies

Control of alcohol products

There are no legislative controls directed at licensing of outlets or licensing hours. There is no regulation of alcohol promotion such as advertising or sponsorships. There is no legislative definition of the minimum legal drinking age. There is no taxation on home-produced alcohol if the alcohol is not sold.

Control of alcohol problems

Drunk driving is punishable by a fine of 50 to 2000 RMB (US\$ 6.03 to US\$ 241.50) and/or suspension or withdrawal of drivers licence. In some severe cases, drunk drivers can be detained for 10 to 15 days. There are some public education and prevention activities on alcohol use and problems, especially in the mass media. Some health education and mass media institutions are involved in the prevention of drinking-related problems, but no nationwide, systematic prevention programmes are conducted in China at present.

Alcohol data collection, research and treatment

Treatment agencies for alcohol-related diseases are mainly located in psychiatric hospitals or internal medicine departments of general hospitals. Monitoring, research and professional training concerning prevention, treatment and rehabilitation are only available in university research centres in major cities such as Hunan, Yunnan and Beijing. Self-help organizations are only available in northern areas, where alcohol-related problems are more severe.

Cook Islands

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	18 000	19 000
Adult (15+)	N/A	N/A	N/A
% Urban	54.8	57.7	60.4
% Rural	45.2	42.3	39.6

Alcohol consumption and prevalence

It is generally believed that home brewing is common in the Cook Islands. However, there are no statistics available on the production or per capita consumption of alcoholic beverages in the Cook Islands.

Mortality, morbidity, health and social problems from alcohol use

Social problems

The number of incidents of police assistance (as opposed to arrest) for public drunkenness rose from 49 in 1993 to 54 in 1994, and fell to 40 in 1995.

Alcohol policies

Control of alcohol products

Locally-produced beer is subject to a domestic excise tax of A\$ 0.20 (US\$ 0.15) per litre, imported beer is subject to an import duty of A\$ 8.36 (US\$ 6.21) per litre pure alcohol (A\$ 0.42/US\$ 0.31 per litre of beer), and imported spirits are subject to an import duty of A\$ 11.65 (US\$ 8.66) per litre of spirits. The price of imported beer is 20 per cent higher than the domestic product, but imported spirits cost the consumer less than those locally produced.

The Liquor Licensing Division of the General Licensing Authority controls the availability of alcoholic beverages through the licensing system. In October 1995 there were 6.6 licences per thousand total population. Communities may collaboratively decide on lodging objections against granting of licences. Trading hours are liberal and the police are responsible for their enforcement. It is an offence for a licensee or manager of licensed premises to sell alcoholic beverages to an intoxicated person, but prosecutions for this offence are rare. It is an offence to sell or supply alcoholic beverages to persons under the age of 18 years. There is a ban on the advertising of alcoholic beverages on television, but no other restrictions. Domestically produced and imported beverages are required to carry alcohol content labels (per cent by volume).

Control of alcohol problems

There is no legislation specifying BAC, and no testing facilities for BAC are available. Health education is carried out primarily through the Health Education Unit of the Public Health Department. School pupils receive a small amount of education on alcohol through the standard curriculum and youth organizations, which have included alcohol education in activities.

Alcohol data collection, research and treatment

The Statistics Office maintains data on imports of alcoholic beverages. There is no formal alcohol-specific treatment programme, but nongovernmental organizations (including three counselling agencies and the Alcoholics Anonymous group on Rarotonga) provide treatment-focused services.

Fiji

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	634 000	726 000	784 000
Adult (15+)	385 000	451 000	512 000
% Urban	37.8	39.3	40.7
% Rural	62.2	60.7	59.3

Health status

Life expectancy at birth, 1990-1995 : 69.5 (males), 73.7 (females)

Infant mortality rate in 1990-1995 : 23 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995 : 2440, PPP estimate of GNP per capita (current int'l \$) : 5780

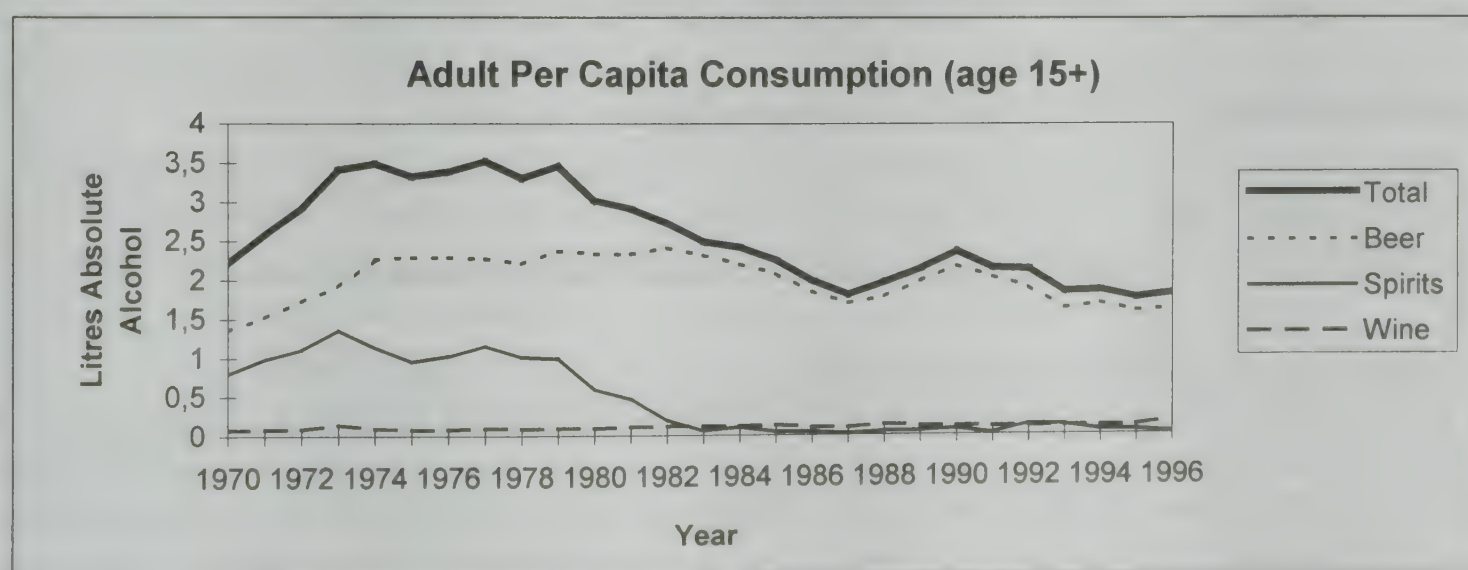
Average distribution of labour force by sector, 1990-1992 : agriculture 44%; industry 20%; services 36%

Adult literacy rate (per cent), 1995 : total 92; male 94; female 89

Alcohol production, trade and industry

Fiji produces spirits and beer for commercial sale. South Pacific Distillery was established in 1981. Carlton Breweries Fiji is the leading alcohol advertiser. In 1984, 30 per cent of the shares of Carlton Brewery were acquired by the Fijian Development Corporation, a subsidiary of the Native Land Development Corporation. Wines and spirits are imported.

Alcohol consumption and prevalence



Consumption

Beer is the alcoholic beverage of choice in Fiji. Since 1983, spirits consumption decreased to the low levels that wine drinking had remained at since the 1970s.

Prevalence

A 1993 survey of persons aged 18 years and over showed that 13.7 per cent had drunk alcohol in the week prior to the survey. Of these, 11.4 per cent had drunk alcohol one or two days in the past week,

1.3 per cent had drunk alcohol between three and six days and 1 per cent drank every day of the previous week. Approximately 25.7 per cent of the males sampled were current drinkers, compared with 2.5 per cent of females.

Economic impact of alcohol

During 1994/1995 Carlton Breweries Ltd paid US\$ 13.7 million in excise on its beer production.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

In 1995 33 per cent of all admissions to Suva's Colonial War Memorial Hospital's Accident and Emergency Unit and 74 per cent of admissions for injury were alcohol-related.

Social problems

During the first nine months of 1995 in Suva, there were 27 people legally charged with "drunk and disorderly" and 16 people charged with "drunk and incapable". The total number of drunk driving convictions in Fiji fell from 214 to 185 between 1992 and 1994.

Alcohol policies

Control of alcohol products

No price controls exist on any alcoholic beverages. All alcoholic beverages are subject to the 10 per cent value added tax imposed on all goods and services. Locally-produced beer is taxed a domestic excise of \$F 0.90 (US\$ 0.44) per litre; locally-produced spirits: \$F16.50 (US\$8.14) per litre; imported beer: import duty of \$F 1.55 (US\$ 0.76) per litre; spirits: \$F 25.75 (US\$ 12.71) per litre.

Licence applications are heard by Tribunals at the District level. Trading hours are controlled by legislation and licence provisions. Liquor licence fees are set by the Liquor Act.

It is an offence for a person under 18 years of age to possess or consume alcohol on licensed premises or in any other public place.

No specific restrictions apply to alcohol advertising. Locally-produced beverages are not required to display alcohol content on their labels.

Control of alcohol problems

There is no single alcohol programme or agency responsible for the formulation of alcohol policy. Alcohol-related problems are addressed, however, through Government agencies such as Education, Health and Police, and alcohol industry matters by Customs and the Central Liquor Board and District Tribunals. In addition, non-governmental organizations are involved in the broad context of social welfare and social development initiatives and, to a lesser degree, in alcohol education and treatment. No formal diversionary systems operate in the criminal justice system.

Breath testing machines capable of estimating BAC were introduced in 1992 and two units were operating in October 1995. Some 549 alcohol breath tests were conducted in 1994, some on a random basis but most on drivers suspected to be under the influence of alcohol. The minimum BAC level is 0.08 g%.

Alcohol data collection, research and treatment

A new national data collection system on minor offences (including Liquor Act offences) is being established by the Police Force. The health system does not have any alcohol-specific treatment programmes and treatment services for alcohol-related problems are limited. The Alcohol Awareness and Family Recovery Programme in Suva is a nongovernmental organization which provides counselling for people with alcohol-related problems and their families. It also sponsors Alcoholics Anonymous groups in Suva and on Viti Levu.

Japan

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	116 807 000	123 537 000	125 095 000
Adult (15+)	89 295 000	100 807 000	104 780 000
% Urban	76.2	77.2	77.6
% Rural	23.8	22.8	22.4

Health status

Life expectancy at birth, 1990-1995 : 76.4 (males), 82.5 (females)

Infant mortality rate in 1990-1995 : 4 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995 : \$39 640, PPP estimate of GNP per capita (current int'l \$) : \$22 110

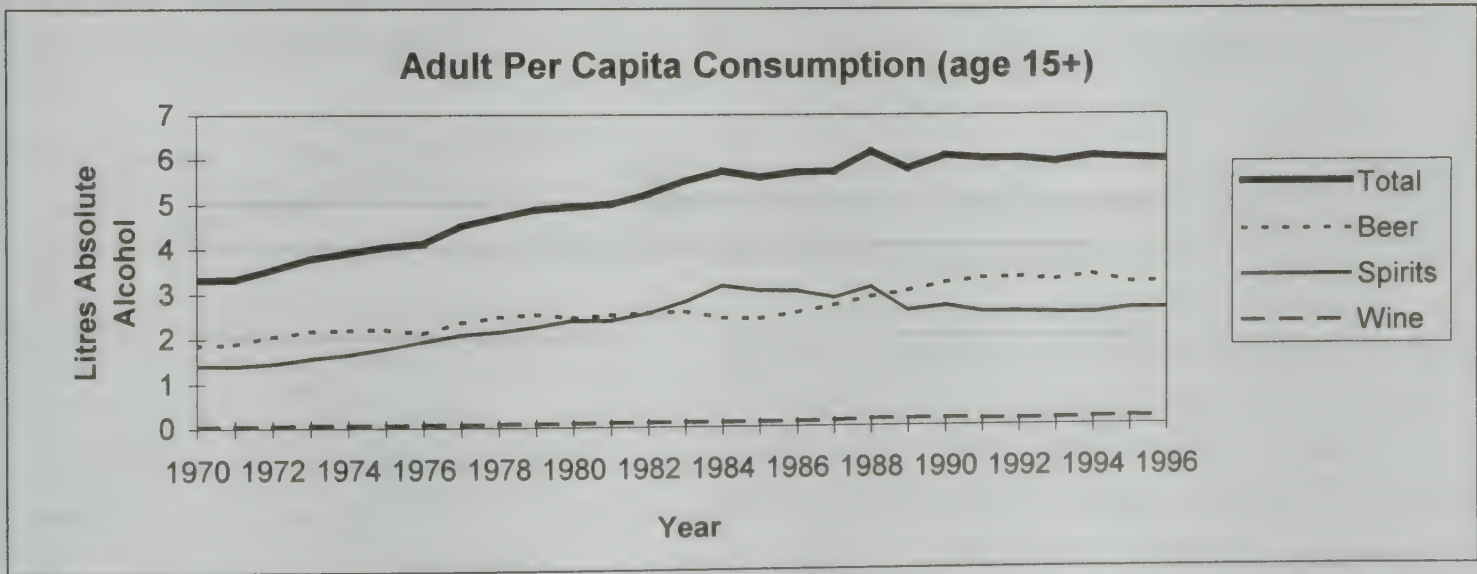
Average distribution of labour force by sector, 1990-1992 : agriculture 7%; industry 34%; services 59%

Adult literacy rate (per cent), 1995 : 95

Alcohol production, trade and industry

Japan is a significant producer of beer, distilled spirits and wine products, both for its domestic market and for export. Japan's four biggest brewers are Asahi Breweries Ltd., Kirin Brewery Co. Ltd., Sapporo Breweries Ltd. and Suntory Ltd. Suntory is the world's eighth largest spirits producer while Kirin is the seventh largest beer producer in the world. Japan's beer market is the fourth largest in the world, and the largest foreign market for American beer. Japan's beer brewers are looking to the world market for expansion opportunities because of increased competition in Japan due to retailing deregulation. Many leading alcohol companies have established joint ventures in Japan, including Anheuser-Busch, Guinness and Coors.

Alcohol consumption and prevalence



Consumption

Alcohol consumption in Japan rose steadily until 1988, and has levelled off since then. Beer has gradually caught up with spirits as the alcoholic beverage of choice. *Sake* (rice wine) is included with wine in the chart above.

Prevalence

In 1992, 69 per cent of the adult population were consumers of alcoholic beverages. In a recent 10-year period, the number of male drinkers rose from 76 per cent to 85 per cent and the number of female drinkers rose from 18 per cent to 53 per cent. A 1989 survey of 1225 people in, or near, the

cities of Sapporo, Shizuoka, Suita and Kochi found that 91 per cent of males and 61 per cent of females were current alcohol drinkers, with 62 per cent of males drinking three to four times a week, compared with 21 per cent of women. Males between 30 and 39 tended to consume the most alcohol.

Age Patterns

In a 1993 national survey, it was estimated that over 80 per cent of schoolchildren between 13 and 17 were current drinkers, 55 per cent of them to intoxication or unconsciousness. A 1990 survey of 1062 students of second year high school found that 24 per cent of males and 17 per cent of females abstained from alcohol.

Alcohol use among population subgroups

A survey of 1098 employees 20 years or older at a computer factory in a suburb outside of Tokyo was conducted in 1985. Approximately 81 per cent of males and 67 per cent of females were current drinkers. Another survey of computer employees was conducted in 1992. Out of a sample of 2581 employees aged 20 years or older, 1098 male and 265 female alcohol drinkers were analysed. Fifteen per cent and six per cent of the male and female drinkers, respectively, were classified as having alcohol-related problems on the basis of the KAST (Kurihama Alcoholism Screening Test) score (13 per cent and 4 per cent of the entire sample respectively). In both surveys, alcohol problems were more prevalent among the less formally educated, in managers, and in those who reported high alcohol consumption.

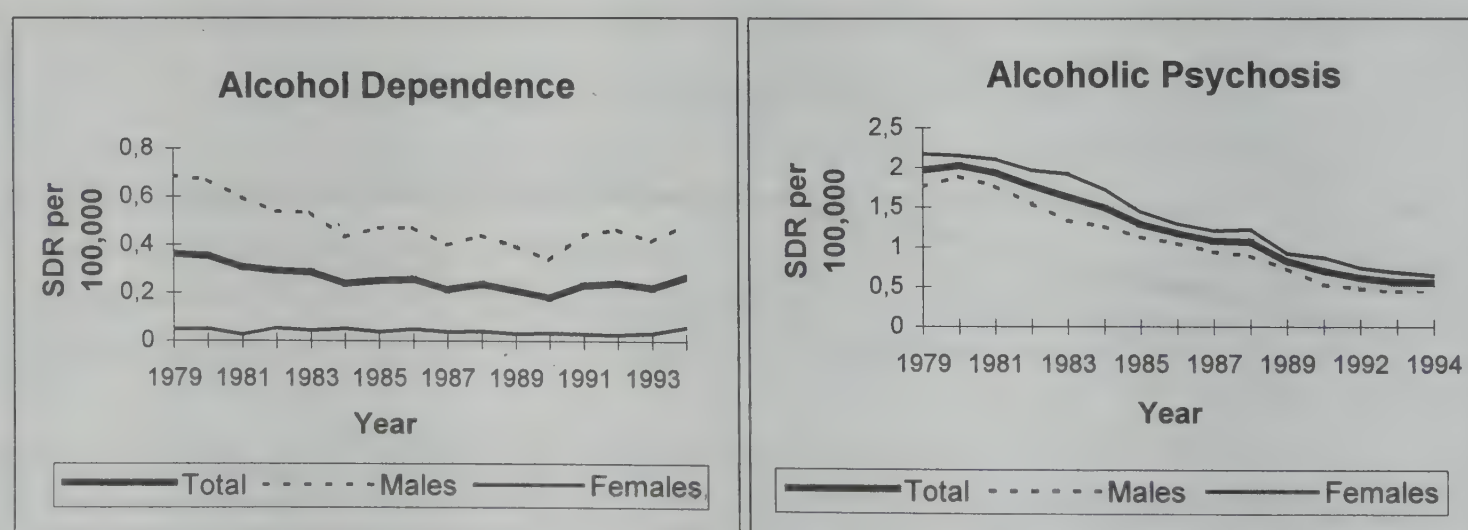
Economic impact of alcohol

In 1981 it was estimated that about 2.7 million persons were employed in the alcohol trade, amounting to about five per cent of the working population. The total cost of alcohol abuse in 1987 was estimated as representing 1.9 per cent of the gross national product that year. The alcohol-attributable costs of medical care in 1987 were an estimated 6.9 per cent of the total national medical expenditure.

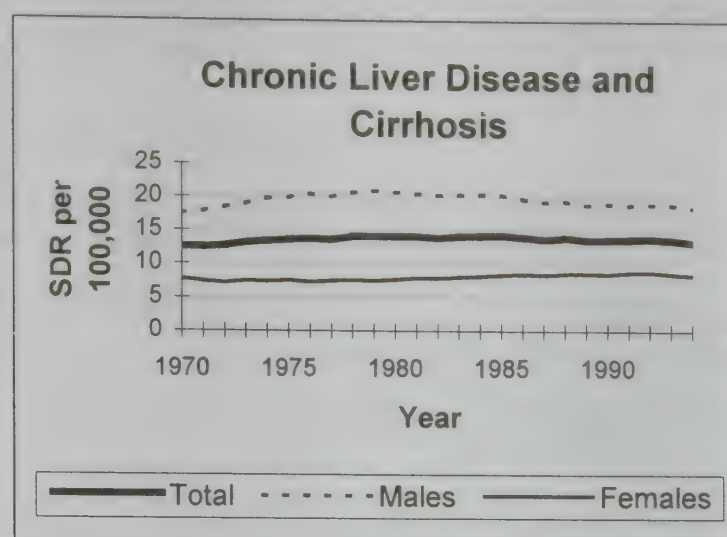
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The number of cases of alcohol dependence rose from 13 000 to 19 600 between 1968 and 1987. However, the death rate per 100 000 population has remained fairly stable at a low level, while death rates attributable to alcoholic psychosis have fallen during the early 1990s.



Mortality



Social problems

In 1983, 20 per cent of child abuse cases were attributed to alcohol dependent parents. In 1982, heavy drinking was declared as the reason for divorce by 18 per cent of wives and two per cent of husbands.

Alcohol policies

Control of alcohol products

There are no price controls on alcoholic beverages. No official subsidy is given to the domestic alcohol trade except in the form of the import tariffs imposed on foreign alcoholic beverages. After pressure from spirits importers and a negative ruling by the World Trade Organization, Japan agreed in principle to raise taxes more than 150 per cent on locally produced *shochu*, and lower taxes 58 per cent for imported whisky during the next two years. A consumption or value added tax of three per cent on alcoholic beverages was introduced as part of the Tax Reforms of 1989. The tax per litre of absolute alcohol for beer is US\$ 31.19; for whiskey and brandy is US\$ 16.80; and for *sake* is US\$ 8.92.

There is no limit on the production of alcoholic beverages, although a licence is required. The production and sale of alcoholic beverages are regulated by the Liquor Tax Law. No liquor licence is necessary for on-premise outlets. For off-premise consumption, there are eight kinds of licences. The closing hour for on-premise establishments is 23:00 hours. Minors (younger than 20 years of age) are prohibited from drinking alcoholic beverages, and retailers are prohibited from serving them. There are no legal advertising restrictions, but a self-imposed industry code has been developed in response to criticism.

Control of alcohol problems

Driving under the influence of alcohol is prohibited by law. There is no upper legal BAC limit. The presence of any alcohol in the blood may result in loss of licence or fines.

Alcohol data collection, research and treatment

The Mental Health Division of the Ministry of Health and Welfare publishes annual reports on the number of inpatients with alcohol dependence. The Statistics and Information Division of the Ministry of Health and Welfare also reports on patients with alcohol dependence.

The National Institute on Alcoholism is a government organization under the control of the Ministry of Health and Welfare that offers training courses for doctors and social workers. There is a legal provision for enforcement of treatment in hospital of any person diagnosed by at least two psychiatrists as alcohol dependent. There are some 76 specialized treatment units in hospitals, offering approximately 3000 beds. Mental health centres in 45 of the country's 47 prefectures offer counselling for problem drinkers, alcohol dependents and their families. In 1985 there were 20 treatment wards, 11 treatment rooms, 5 treatment clinics and 7 halfway houses. These facilities were concentrated in cities, mostly privately operated, and in many cases associated with psychiatric departments. Few treatment facilities were available for female alcohol dependents. Emphasis is shifting from inpatient to outpatient treatment.

Danshukai is the most powerful self-help group and has 47 000 alcohol dependent members. Alcoholics Anonymous (AA) has spread, mainly in big cities, and now has 3000 to 5000 members. Temperance societies collaborate with Danshukai or AA.

Kiribati

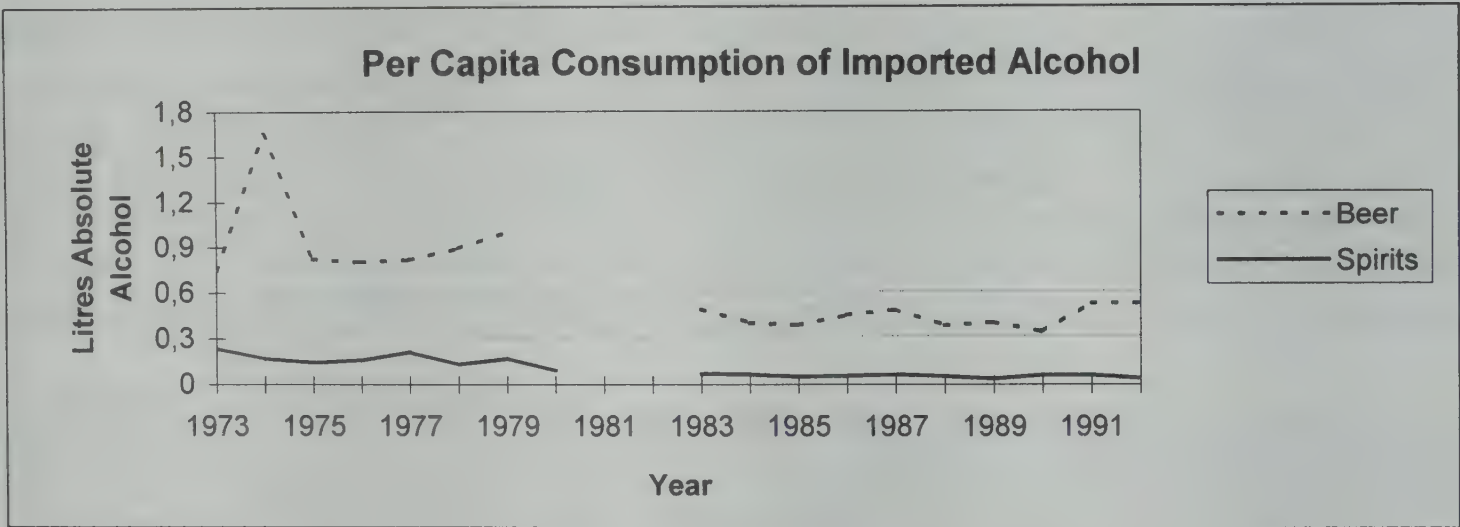
Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	72 000	79 000
Adult (15+)	N/A	N/A	N/A
% Urban	31.7	34.6	35.7
% Rural	68.3	65.4	64.3

Socioeconomic situation

GNP per capita (US\$), 1995 : 18 720

Alcohol consumption and prevalence



Consumption

There is no information on domestic production of alcohol. Beer is the beverage of choice among imported alcoholic beverages.

Lao People's Democratic Republic (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 205 000	4 202 000	4 882 000
Adult (15+)	1 861 000	2 369 000	2 697 000
% Urban	13.4	18.6	21.7
% Rural	86.6	81.4	78.3

Health status

Life expectancy at birth, 1990-1995 : 49.5 (males), 52.5 (females)

Infant mortality rate in 1990-1995 : 97 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995 : 350

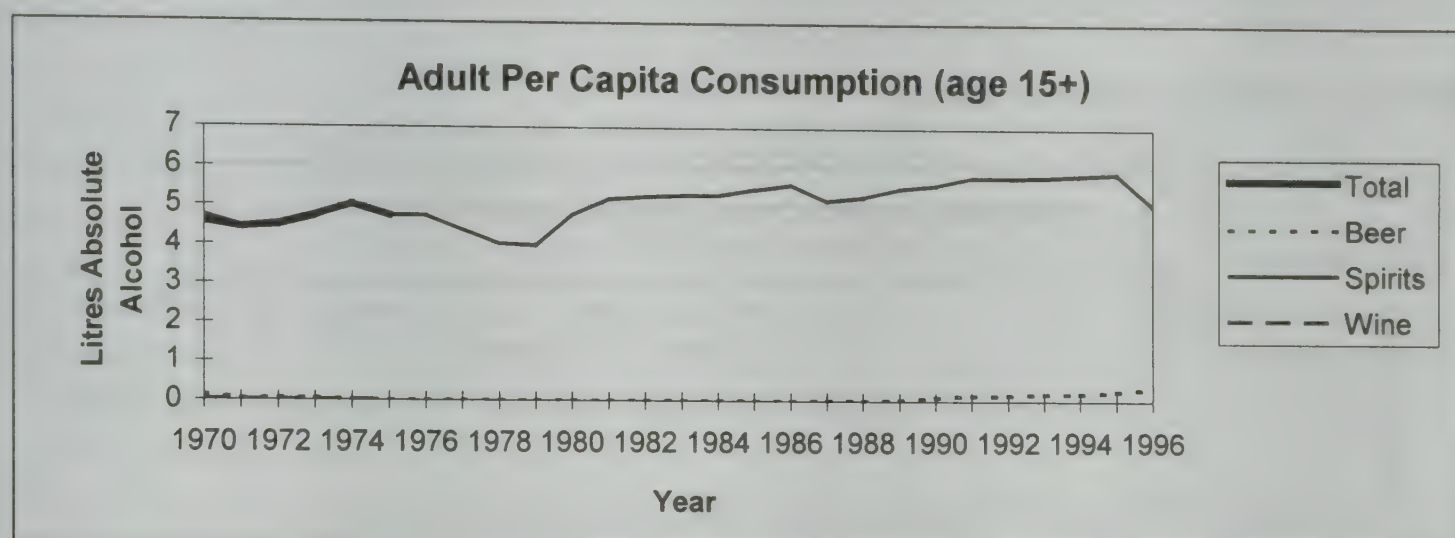
Average distribution of labour force by sector, 1990-1992 : agriculture 76%; industry 7%; services 17%

Adult literacy rate (per cent), 1995 : total 57; male 69; female 44

Alcohol production, trade and industry

The Lao People's Democratic Republic produces beer and distilled spirits.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice is distilled spirits. There are no data available on wine consumption after 1975. Beer consumption is very low, but has risen slightly since the early 1990s. There is no information on the consumption of smuggled or home- or informally-produced alcoholic beverages.

Malaysia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	13 745 000	17 557 000	20 689 000
Adult (15+)	10 446 000	13 351 000	13 282 000
% Urban	34.1	50.6	54.7
% Rural	65.9	49.4	45.3

Health status

Life expectancy at birth, 1994 : 69.4 (males), 74.0 (females)

Infant mortality rate in 1995 : 10.3 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995 : 3890, PPP estimate of GNP per capita (current int'l \$) : 9020

Average distribution of labour force by sector, 1990-1992 : agriculture 26%; industry 28%; services 46%

Adult literacy rate (per cent), 1995 : total 84; male 89; female 78

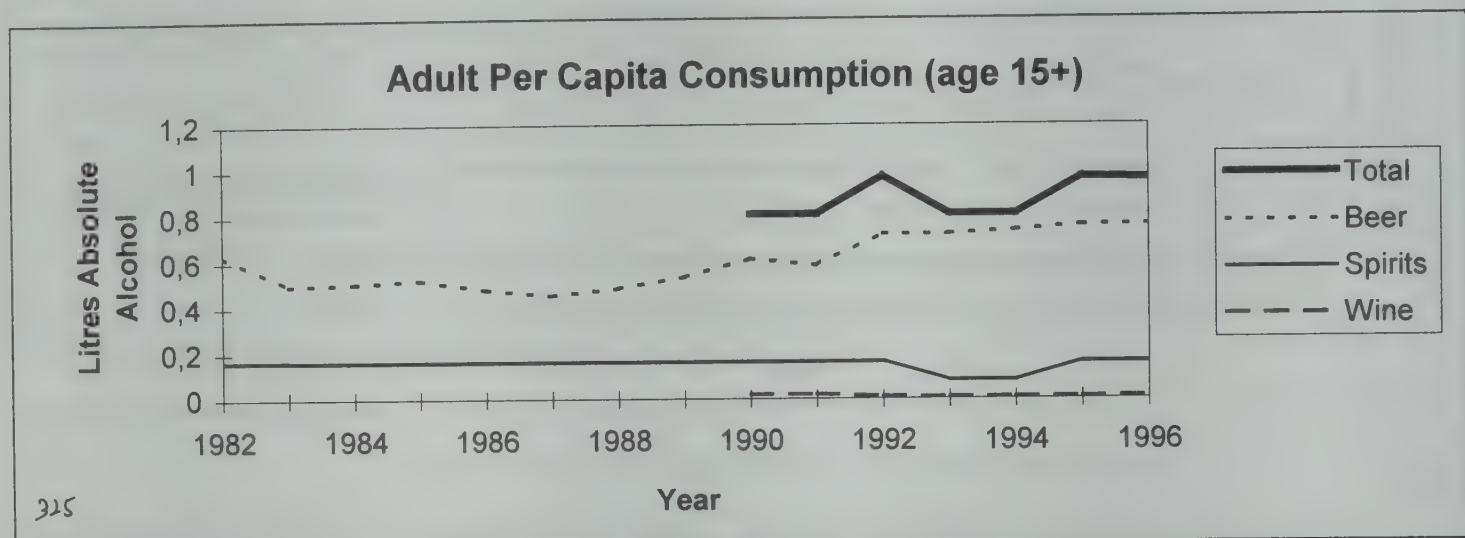
Alcohol production, trade and industry

There are two main breweries in Malaysia, both located in or near the capital city of Kuala Lumpur. Guinness Anchor Berhad is a joint venture between Guinness and Asia Pacific Breweries of Singapore, itself a joint venture between Heineken and a local soft drink company. The largest shares of Carlsberg Brewery Malaysia Berhad are controlled by Carlsberg AS of Denmark, by a large

Malaysian plantation holding company, and by a holding company controlled by the Armed Forces Co-operative Society. Importation of spirits, and in particular cognac, is a substantial business. The leading spirits importer is controlled by the holding company dominated by the Armed Forces Co-operative Society, in alliance with a joint venture between Diageo and Moët Hennessey.

A leading NGO, the Consumers Association of Penang, estimates that the local spirits industry produces approximately R180 million (US\$ 43.4 million) worth of "*samsu*", the generic title for cheap local spirits products, per year. These drinks average 38 per cent alcohol, and are widely available illegally from outlets such as sundry shops and private residences. The smallest bottle of *samsu* cost RM 1.50 (US\$ 0.36) in 1996, the equivalent of a bar of chocolate.

Alcohol consumption and prevalence



Consumption

Using production and import data, limiting the population to those between the ages of 15 and 69, and excluding all but 20 per cent of women, Kroll et al., (1988) and his colleagues estimated per capita consumption in 1984 at 1.86 litres. Jernigan and Indran (forthcoming 1999) estimated consumption among drinking adults (adults excluding 80 per cent of women and 80 per cent of Malays) at 4.3 litres.

Prevalence

The national government has determined that asking questions about alcohol use in large population-based national surveys would be insensitive to the beliefs of the country's Malay majority, and so national prevalence figures are unavailable.

Small population and hospital-based studies have identified alcohol drinkers in each of the three major ethnic groups. A small population-based survey found in 1980 that men are far more likely to drink than women. Indian men are the most likely to drink daily and to consume three or more drinks per occasion. A study of all hospital admissions in the late 1980s found that 52 per cent of Chinese, 38 per cent of Indians, and 24 per cent of Malays were current drinkers, while a study published in 1994 of consecutive attendees at a general practice in Kuala Lumpur identified 70 per cent of the Chinese, 11 per cent of Malays and 42 per cent of Indians as current drinkers.

Another study estimated that five per cent of rural Malays consume alcohol, while nearly a third of indigenous people drink, usually *samsu* in conjunction with festivals.

Age Patterns

A 1988 study of 614 secondary school pupils aged 13 to 15 found that the vast majority never drank alcohol, 1 per cent drank daily, an additional 1.3 per cent drank weekly, and 9 per cent drank less than once a month.

In 1991, a sample of approximately 1000 elderly people from Peninsular Malaysia found alcohol consumption low, but more common among men (15 per cent) than women (7 per cent). Of those who drank, almost half thought they were drinking too much, and 40 per cent of the men and 2 per cent of the women said their families had complained they were drinking too much.

Economic impact of alcohol

Alcohol excise and import duties earned the national government more than RM 601 million (US\$ 145.2 million) in 1994.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A study in the late 1980s established prevalence of alcohol abuse or dependence among patients admitted to the medical, orthopaedic or surgical wards of the General Hospital in Kuala Lumpur at 12 per cent of all patients, and 25 per cent of the drinking population. Fourteen per cent of Chinese drinkers and nine per cent of all Chinese were abusers or dependents. Similar figures for Indians were 37 per cent and 22 per cent, and for Malays 20 per cent and six per cent, respectively. All abusers/dependents were male, and the mean age was 54, while the mean age of the sample was 44. The study report speculated that lower social classes were over-represented because they were more likely to seek treatment at the general hospital, rather than at private centres. A 1988 study in the psychiatric ward of the same hospital found alcohol dependence accounted for just over one per cent of male admissions. However, the report attributed this lower number to severe overcrowding on the ward, leading to admission only of the most disturbed patients.

Mortality

Blood samples from 155 consecutive cases from various causes of death undergoing post-mortem examination at the forensic section of the General Hospital Kuala Lumpur from August 1988 to mid-September 1989 were analysed. Of these 59 (38 per cent) were from fatal road traffic crashes. Thirteen of these (22 per cent) had BAC greater than 0.05 g%. Of these, one case was Malay (7.7 per cent), five were Chinese (38.5 per cent) and seven (53.8 per cent) were Indian. Nearly all were male (91.5 per cent, 54 out of 59).

Morbidity

Of 877 patients with head injuries presenting at the casualty ward of the general hospital in Kuala Lumpur, 31 per cent had blood alcohol levels greater than 0.05 g%. Ninety-one per cent of these patients were male. Forty-one per cent were Chinese, 39 per cent were Indian, and 18 per cent were Malay. Two thirds had received their head injury in motor vehicle crashes.

Prevalence of alcohol as aetiology in a sample of persons over age 12 presenting with chronic liver disease cases between 1982 and 1988 was 36 per cent. Male to female ratio among the alcohol-related cases was 13.5:1, with Indians being significantly over-represented.

Health problems

Reports of ethanol and methanol poisoning have decreased since the government established licensing of *samsu* production in 1986. Of 14 such cases studied in 1977, only nine admitted to taking any alcoholic drinks prior to being admitted to hospital, illustrating a common tendency toward denial of drinking alcohol.

A pilot study in 1986 attempted to establish prevalence of drink-driving. Testing of 480 randomly-selected drivers of cars, motorbikes and vans during a 24-hour period revealed that 4.8 per cent of drivers had BAC in excess of 0.08 g%. Proportions of intoxicated drivers were highest between 01:00 hours and 02:00 hours (55 per cent) and between 02:00 hours and 03:00 hours (41 per cent).

Social problems

Survey Research Malaysia conducted a survey on the causes of domestic violence. According the Woman Aids Organization, an NGO, Chinese and Indian respondents listed "influence of alcohol" as the leading reason for battery, while across all ethnic groups "influence of alcohol" ranked second, behind "jealousy."

Alcohol policies

Control of alcohol products

In most of the country, outlets are supposed to be licensed by licensing boards established by the state, that rarely turn down applications. Industry sources estimate there are 35 000 licensed outlets

nationwide. In addition, smaller outlets such as coffee shops, while not permitted to sell beer for on-premises consumption, will routinely provide the customer with a beer bottle and an opener. The law permits small purveyors without alcohol sales licences to maintain unlimited amounts of alcohol for personal consumption, which is sometimes sold to the public.

In the state of Kelantan, the State Government controls the sale of alcohol more tightly by limiting the issue of licences for sale of alcohol. Alcohol can be purchased from a small number of supermarkets, retail shops, hotels and restaurants.

Taxes on beer were increased in 1991, 1992 and 1993, and overall duties and taxes on alcohol are fairly high, resulting in comparatively high alcohol prices. Taxes are flat rates and do not rise with inflation. In addition to duties and excise taxes, the government levies a 15 per cent sales tax on alcohol at the retail level.

Direct alcohol advertising is forbidden on broadcast media, and on billboards except in the east Malaysian state of Sabah. Alcohol advertising is permitted in cinemas and on video cassettes, as well as in print media.

Control of alcohol problems

The Ministry of Health formulated an alcohol abuse prevention programme in 1996. The strategies for the programme include health promotion activities aiming to create awareness among adolescents and the general public on the hazards associated with the consumption of alcohol, amending or formulating legislation for stricter control of alcohol consumption among those under 18, and restricting direct and indirect advertising. Other strategies include strengthening treatment and rehabilitation centres, and follow-up.

At present, there is no law that forbids alcohol drinking by minors (those under 18 years of age). However, the legal sale of alcohol to minors is in the process of being amended under the Food Regulations 1985. In 1996, the government passed a strict new drinking-driving law, setting the legal limit for driving at 0.08 g%, and prescribing a penalty of RM 2000 (US\$ 800) or six months in jail or both for the first offence along with loss of licence. Drivers have 24 hours within which to report a crash, causing a likely under-reporting of drunk driving crashes.

There is no requirement for alcohol education in the schools, although it is sometimes covered in a general substance abuse curriculum.

Alcohol data collection, research and treatment

The Centre for Drug Research at the Universiti Sains Malaysia in Penang conducts periodic surveys of alcohol and other drug use among schoolchildren, teacher training school and university students, and drug offenders. This information is made available for use by the Ministry of Health for programme planning.

General practitioners and doctors in hospitals are often the first contact persons for individuals with alcohol problems. Some hospitals offer counselling to alcohol dependent patients in their psychiatric wards. Those suffering from alcohol dependence and other alcohol problems may be admitted to psychiatric hospitals for treatment and counselling. Psychiatric hospitals often house alcohol-dependents for long periods of time. Social nongovernmental organizations such as Malaysian Care, Sentul Help Centre, and Shelter look into the needs of alcohol dependents but are unprepared to treat people. The indigenous healer (*bomoh*) and other religious authorities are used by many Malaysian families to heal alcohol and other drug-dependent persons using a ritual ceremony or prayer. The success rate from this form of treatment is unknown. A chapter of Alcoholics Anonymous has met in Kuala Lumpur for 20 years, but has not spread widely, perhaps due to its religious basis and the fact that meetings are often in churches and other Christian centres.

A forthcoming publication of WHO (Riley and Marshal [ed.] *Alcohol and public health in eight developing countries*, 1999) includes an in-depth case study from Malaysia.

Marshall Islands (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	31 000	47 000	57 000
Adult (15+)	15 000	23 000	28 000
% Urban	59.6	67	68.3
% Rural	40.4	33	31.7

Alcohol consumption and prevalence

According to data supplied by the Marshall Islands government, the value of alcohol trade has grown from US\$ 17 155 in 1980 to US\$ 75 054 694 in 1995. Between 1990 and 1995, the volume of alcohol sold increased dramatically from 401 748 litres to 1 823 453 litres. It is not possible to compute per capita consumption because alcoholic strength is not clear from the figures provided. (If these figures were for beer only, which is the most conservative assumption, then adult per capita consumption of absolute alcohol would have increased from 0.9 to 3.2 litres between 1990 and 1995.)

Micronesia (Federated States of)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	N/A	N/A
Adult (15+)	N/A	N/A	N/A
% Urban	25.0	26.4	28.0
% Rural	75.0	73.7	72.0

Alcohol consumption and prevalence

Consumption

Beer has traditionally been the beverage of choice of residents of Micronesia. One consequence of prohibition on the island of Weene in the state of Chuuk is that beverage preference has shifted from beer to distilled spirits. There is no further information available on adult per capita alcohol consumption in the country as a whole.

Prevalence

Interviews with 1000 people aged 15 years or over, in a sample stratified by age, gender and residential location, in the community of Weene during June 1985 revealed that 22.6 per cent of the respondents were current drinkers, another 22.6 per cent were former drinkers and 54.8 per cent were non-drinkers. Only 0.6 per cent of the women were current drinkers, and only 2.3 per cent were current or former drinkers. In contrast, 85.5 per cent of the men were current or former drinkers. Half of all current drinkers consumed 10 or more drinks per session, and 61.5 per cent consumed 7 or more drinks per session.

Age patterns

Over half of 15 to 19 year olds do not drink, but in the age cohort from 20 to 24, the great majority drink.

Economic impact of alcohol

In the 1985 general population survey, 12 per cent reported spending "all their money" on alcohol at least once.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

Substantial portions of the drinkers in the 1985 sample could be classified as problem drinkers; just over two-thirds reported drinking until they became so ill they could not walk without assistance or drinking to unconsciousness, and slightly over 40 per cent reported getting into fights while intoxicated or having been arrested by the police for drunk and disorderly behaviour.

Social Problems

From the 1985 general population, 41.5 per cent of drinkers had entered into a fight when drinking, and 41 per cent had been arrested by the police. Six per cent of drinkers had been involved in a vehicle crash while drinking alcohol.

Alcohol policies

Control of alcohol products

Prohibition of alcoholic beverages was implemented in 1921 and lasted until 1959. A new prohibition of alcohol on the island now known as Weene was introduced in 1978 (following a referendum) and was still in place in 1990.

Mongolia

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	1 663 000	2 177 000	2 410 000
Adult (15+)	947 000	1 287 000	1 493 000
% Urban	52.1	58.0	60.9
% Rural	47.9	42.0	39.1

Health status

Life expectancy at birth, 1990-1995 : 62.3 (males), 65.0 (females)
Infant mortality rate in 1990-1995 : 60 per 1000 live births

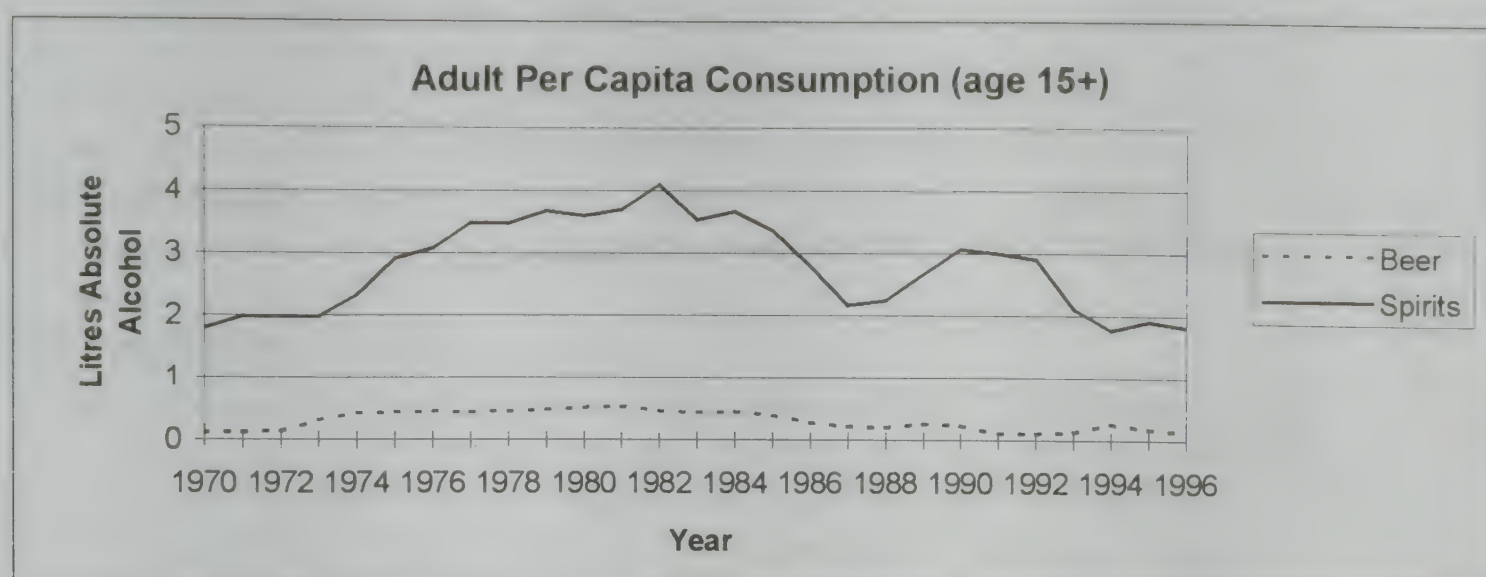
Socioeconomic situation

GNP per capita (US\$), 1995: 310, PPP estimates of GNP per capita (current int'l \$), 1995: 1950 .
Average distribution of labour force by sector, 1990-1992 : agriculture 40%; industry 21%; services 39%
Adult literacy rate (per cent), 1995 : total 83; male 89; female 77

Alcohol production, trade and industry

Mongolia produces beer and distilled spirits. There is no information available on Mongolia's imports or exports of alcoholic beverages.

Alcohol consumption and prevalence



Consumption

Distilled spirits are the alcoholic beverage of choice in Mongolia, although spirits consumption diminished substantially, along with a smaller decrease for beer, in latter half of the 1980s and again in the mid 1990s.

New Zealand

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3 113 000	3 360 000	3 575 000
Adult (15+)	2 280 000	2 577 000	2 740 000
% Urban	83.4	84.8	86.1
% Rural	16.6	15.2	13.9

Health status

Life expectancy at birth, 1990-1995 : 72.5 (males), 78.6 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 14 340, PPP estimates of GNP per capita (current int'l \$), 1995: 16 360.

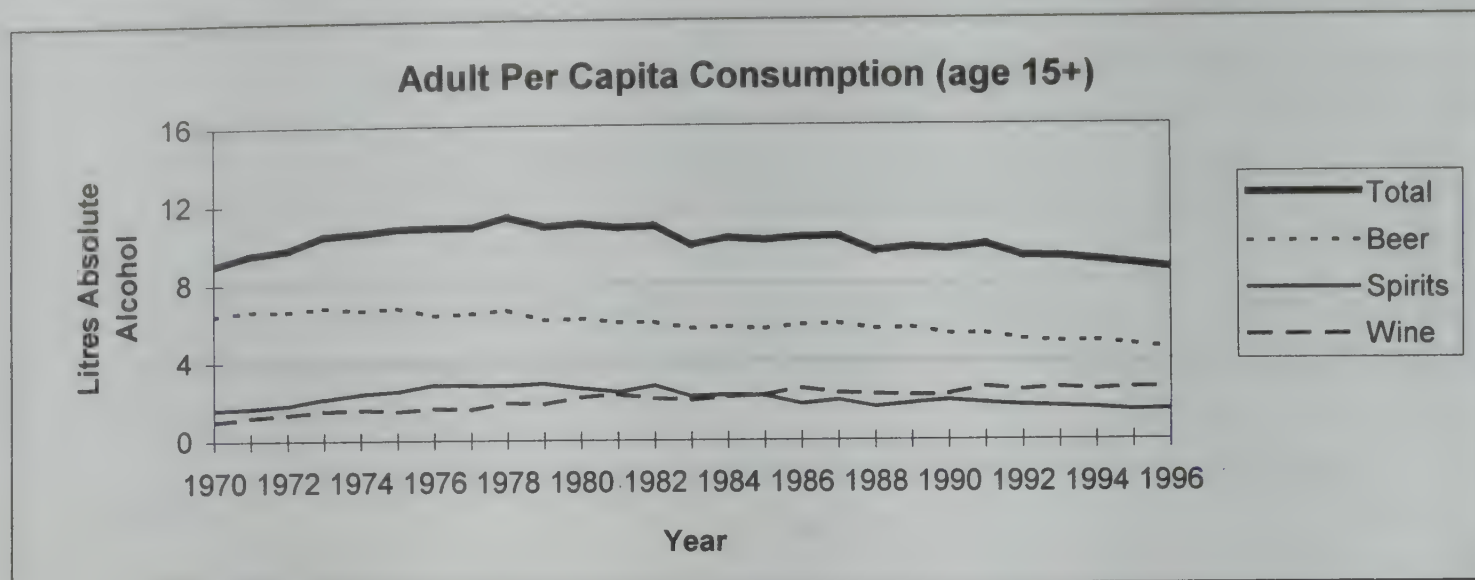
Average distribution of labour force by sector, 1990-1992 : agriculture 11%; industry 23%; services 66%

Adult literacy rate (per cent), 1995 : 95

Alcohol production, trade and industry

New Zealand produces beer, wine and distilled spirits products. The beer market is dominated by Lion Nathan and DB Group. Lion Nathan is the country's largest brewer, brewing and marketing foreign brands such as Coors as well as its own brands, namely Castlemaine XXXX, Steinlager and Lion Red. In April, 1998, Japan's Kirin Beverage Company forged an alliance with Lion Nathan by purchasing 45 per cent of its shares. The spirit trade is overwhelmingly concentrated in the hands of two companies - New Zealand Wines & Spirits and Allied Liquor Merchants - which produced 9 of the top 10 brands between them in 1993.

Alcohol consumption and prevalence



Consumption

The amount of alcohol available for consumption is calculated by the government body, Statistics New Zealand, from producers for domestic consumption, incorporating imports and exports. It does not include consumption of home-brewed alcohol. In 1995, home production of alcohol was estimated at three per cent of the total alcohol available. Alcohol available for each person aged 15 years and over is calculated using these data and Statistics New Zealand's quarterly population estimates. The most recent data are for 1996, when 8.7 litres of alcohol was available for consumption per person aged 15 years and over. This is a 28 per cent decline in consumption since 1978. A key factor in the decline of alcohol consumption has been taxation, with price being a major determinant of alcohol consumption in New Zealand. Drink-driving legislation and enforcement together with changing social attitudes have also contributed to the decrease in alcohol consumption and alcohol-related harm during the 1990s. Increased enforcement of other non-alcohol related legislation is likely also to have contributed to lower levels of alcohol consumption. Domestic violence programmes, including media campaigns, linked to legislation such as the Domestic Violence Protection Act are an example of these initiatives.

Prevalence

A 1995 survey of 4232 people 14 to 65 years of age found that 89 per cent of men and 85 per cent of women were drinkers of alcohol. Nineteen per cent of male drinkers and 10 per cent of female drinkers reported drinking every day. The top 10 per cent of drinkers were predominantly male (83 per cent) and drank almost half of the total alcohol consumed, on average, the equivalent of 31 cans of beer per week (about 403 grams of alcohol).

In 1992, a health survey among 5800 persons aged 15 years and over showed that almost one quarter had never drunk alcoholic beverages. About 64 per cent were likely to have drunk alcohol during the previous week, 60 per cent of whom were males.

Age Patterns

In 1997, The Alcohol Advisory Council of New Zealand studied the drinking habits of teenagers. In a survey of 500 New Zealanders between the ages of 14 and 18, it was found that 28 per cent reported binge drinking (five or more drinks in a row) in the past fortnight. Thirty-four per cent reported binge drinking the last time they drank.

In the 1995 survey, males aged 18 to 24 years were over-represented in the heaviest drinking 10 per cent, comprising 33 per cent of the heaviest drinkers but only 9 per cent of the total survey. Fifty per cent of females who drank heavily (in the top 10 per cent) were also in the 18 to 24 age group.

A 1994 report reviewed findings from a cohort of 965 Christchurch children studied annually from birth. At the age of 15, a questionnaire revealed that 28.4 per cent did not drink during the previous year, 23.9 per cent drank once or twice during the previous year, 20.4 per cent drank once a month and 6.7 per cent drank at least once a week. Over half the respondents said that a typical drinking session involved the consumption at least 30 grams of pure alcohol.

Alcohol use among population subgroups

A study of 4286 children, based on a random sample of children born between 2 July, 1990 and 30 June, 1991, and the drinking habits of their mothers, found that 41.6 per cent of the women sampled consumed alcohol during pregnancy. Pregnant alcohol users tended to be older, better educated, and have higher socioeconomic status than their abstaining counterparts. Of those women who consumed alcohol, the frequency was between one and three times during pregnancy in 13.6 per cent of cases, less than weekly in 67.7 per cent of cases and more than once a week in 18.7 per cent of cases.

Economic impact of alcohol

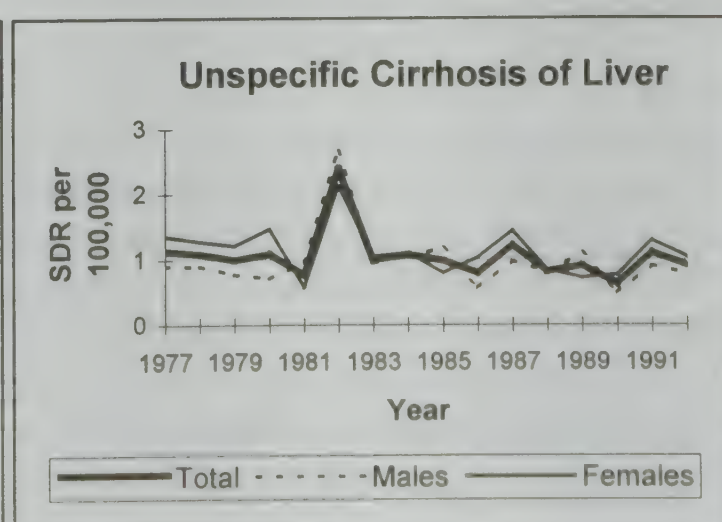
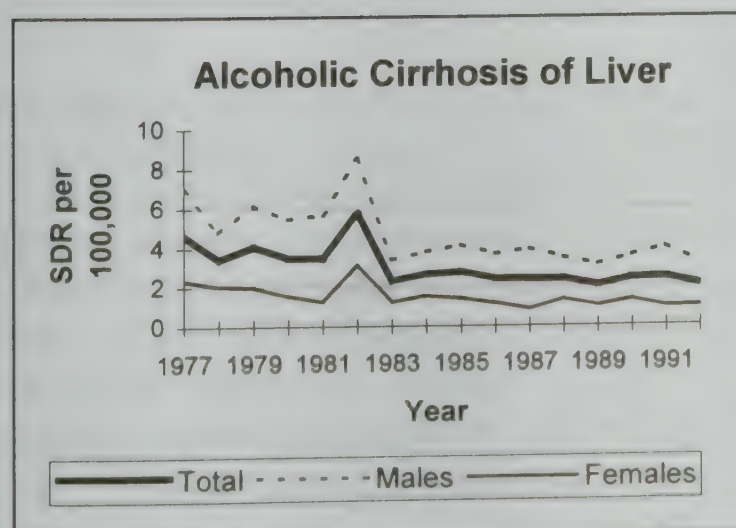
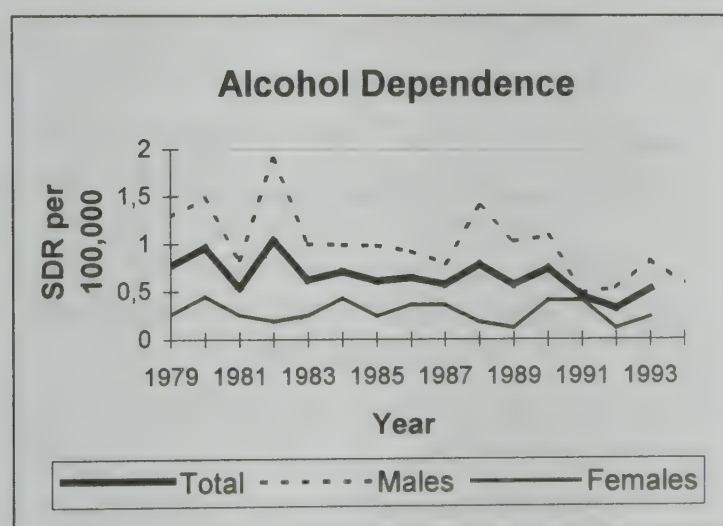
Government revenue from alcohol in 1994/1995 was NZ\$ 563 million (US\$ 289.1 million), accounting for 1.8 per cent of the total government budget of NZ\$ 30 840 million (US\$ 15 840 million). External costs of alcohol, based on lost production from premature death and sickness, reduced working efficiency and excess unemployment, and direct costs such as hospital costs, injury compensation payments, and police and justice system costs, were estimated at between NZ\$ 1045 million (US\$ 536.6 million) and NZ\$ 4005 million (US\$ 2057 million) in 1991, the most recent year for which such an estimate is available.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1990, a study of 930 individuals at age 18 found alcohol dependence among 10.4 per cent of the sample. Psychiatric first admission rates per 100 000 population for alcohol dependence in 1993 were 71.8 for males and 26.3 for females.

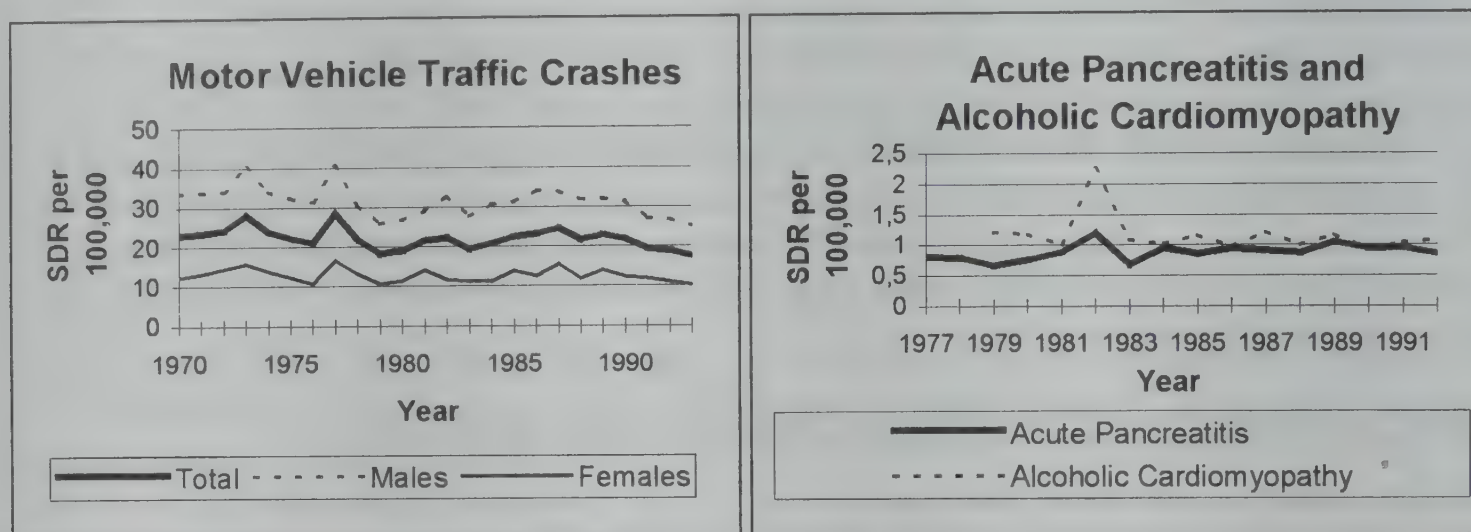
In the 1994 report on a cohort of children in Christchurch, approximately 4.9 per cent of the sample met diagnostic criteria for alcohol abuse. Another examination of a birth cohort of 953 16 year olds in 1995 found that 9.3 per cent were drinking at abusive or hazardous levels. In both studies, indicators of "abuse" included: drinking alcohol at least once a week; reporting that the typical amount consumed on a single occasion exceeded 90 ml of pure alcohol; reporting having consumed the equivalent of at least 180 ml of pure alcohol on one occasion in the last three months and reporting five or more alcohol-related problems in the last year.



Mortality

In 1994, an estimated 142 people died from alcohol-related diseases such as alcohol dependence, alcoholic liver disease and cirrhosis, alcohol poisoning, alcoholic psychoses and alcohol abuse. This figure does not include the contribution of alcohol to deaths from road traffic injuries, other injuries, cancer, cardiovascular diseases and other conditions. It is estimated that in 1996, 30 per cent of all drinkers killed in motor vehicle crashes had alcohol levels above the legal limit.

Alcohol-related mortality rates declined 30 per cent between 1980 and 1994, probably reflecting the decline in overall per capita alcohol consumption over that period.



Alcohol policies

Control of alcohol products

A price freeze on beer was applied from 1982-1984. After the control was lifted, prices became subject to surveillance. Since the mid-1980s, it has been the policy of the government to link the price of alcohol to inflation as a revenue and a public health measure.

As a form of local community control, a system of licensing trusts was developed in the 1940s and adopted by electors in parts of New Zealand as an alternative to normal licensing in former "dry" areas. In 1999, just three "dry" areas remained, and the trusts' monopoly of local public drinking markets was likely to be removed.

In general, sales of alcoholic beverages are controlled via a licensing system. The 1990 Sale of Liquor Act greatly simplified and liberalized the licensing system, removing restrictions on trading hours, placing greater regulatory responsibility on local authorities and increasing penalties for offences. There are now four different kinds of licences - on, off, club, and special - as opposed to 29 previously. Applications for all new licences and uncontested renewals are initially processed locally for ultimate decision by a national Liquor Licensing Authority. These decisions may be appealed to the civil courts. Renewals and special licences are decided by District Licensing Agencies. Hours of trading are specified on each licence, and 24 hour licences are available.

The Sale of Liquor Act was reviewed in early 1997 by an Advisory Committee to the Department of Justice to determine whether the Act was meeting its objective of establishing a reasonable system of control over the sale and supply of liquor to the public with the aim of contributing to the reduction of alcohol abuse. The review recommended a number of changes to the Act, and these proposed changes may be considered by Parliament in 1998/1999.

Industry advertising practices are controlled by self-regulation. As of 1992 alcohol brand advertising is allowed on television and radio after 21:00 hours and before 06:00 hours, subject to the voluntary code of practice, which includes not associating alcohol with aggressive or unduly masculine themes or behaviour or with vehicles, boats or hazardous activities, and not appealing to minors by referring to heroes or heroines of the young. Advertisements are subject to previewing for approval to air. Complaints are directed to the Advertising Standards Authority Complaints Board.

The alcohol industry recently adopted a voluntary code of practice concerning the marketing, packaging and sale of alcoholic drinks that may appeal to younger people (e.g. alcoholic sodas).

Control of alcohol problems

The Alcohol Advisory Council of New Zealand (ALAC), appointed by the Minister of Health with a secretariat of 18 and a budget of NZ\$ 6 million (US\$ 3 million) funded by alcohol taxes, is charged by statute with promoting moderation and preventing misuse of alcohol. The Ministry of Health published a National Drug Policy on Tobacco and Alcohol in 1996 that takes a harm reduction perspective, setting the priority for alcohol on reducing hazardous and excessive consumption and associated injuries, violence and other harm in a number of settings. Key target groups include young people, the *Maori* community, people with alcohol and other mental health disorders, poly-drug users, and pregnant women.

The legal blood alcohol limit for drivers is 0.08 g% for adults, and 0.03 g% for persons under 20 years of age. Penalties for exceeding these limits include fines of up to NZ\$ 4500 (US\$ 2311), imprisonment not exceeding three months, and mandatory disqualification from driving for up to six months. For causing death or injury, penalties include a fine of up to NZ\$ 6000 (US\$ 3081), imprisonment of up to five years and mandatory disqualification for at least a year. In a small number of cases, impaired drivers causing death have been charged with manslaughter. The penalty for exceeding 0.02 g% by a person previously convicted within five years of the first offence is mandatory suspension of the driver's licence. These laws are enforced by the police who began an aggressive programme of random alcohol breath testing in 1993 as a deterrence policy.

The legal minimum age for purchase, sale and supply of alcohol is 20, but exemptions regarding types of premises, service of alcohol with a meal, and the presence of responsible relatives create situations where 18 and 19 year olds and children may legally drink on licensed premises. These exemptions make the drinking age difficult to police, but violations may be prosecuted by the police and jeopardize licence renewal. There is no age restriction for possession or consumption of alcohol in public or in private.

The Sale of Liquor Act 1989 required provision of food and non-alcoholic drinks on all on-licensed premises, but low alcohol beverages are not promoted extensively and there is no favourable taxation policy to make such beverages cheaper. ALAC has promoted a host responsibility training programme since the early 1990s, aimed at improving serving practices to avoid intoxication and drink-drive related injuries. This is aimed at both licensed premises and private hosts, and includes a programme for use in *Maori* communities.

Media campaigns to promote moderation and host responsibility or to reduce impaired driving are sponsored mainly by ALAC and the Land Transport Safety Authority. ALAC is the largest funder of public campaigns to reduce alcohol-related problems and to promote host responsibility. ALAC has published maximum drinking guidelines for men and for women. Health and education agencies have developed school curriculum education packages. Other NGOs also run educational initiatives about alcohol, sponsored by fees, private enterprise and grants. Regional Health Authorities employ alcohol health promotion workers to facilitate community action on alcohol issues, which includes developing local policies and mechanisms for such entities as police, local government, and health agencies to reduce alcohol-related harm. Community action programmes on reducing drink driving or other alcohol-related harm are also run in geographical and *Maori* settings.

The agreement to permit alcohol brand advertising also mandated NZ\$ 1.5 million (US\$ 770 300) per year to be allocated by broadcast media industries for moderation and other public health-oriented advertisements.

Alcohol data collection, research and treatment

ALAC is New Zealand's largest funder of alcohol research. A national Alcohol Research and Public Health Research Unit is established at the University of Auckland, and carries out a range of policy-related research including monitoring drinking behaviour. A Public Health Group within the Ministry of Health has targets related to alcohol, and reports regularly on data relevant to those targets, including alcohol production and trade figures, and health-related statistics collected by the Health Information Service.

The Health Research Council (HRC), the prime funder of medical and public health research in New Zealand, peer reviews alcohol-related research grants submitted to it. Research training fellowships or scholarships are organized through the HRC and ALAC.

Crown health enterprises provide publicly funded treatment and some health promotion programmes. Many treatment services operate support services for families as well, and Alcoholics Anonymous groups are active in most population centres.

Palau

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	12 116 000	15 122 000	17 225 000
Adult (15+)	7 282 000	10 546 000	12 385 000
% Urban	63.0	60.0	71.0
% Rural	37.0	40.0	29.0

Alcohol consumption and prevalence

Consumption

Because import and taxation information regarding alcohol is not reliable, consumption rates cannot be calculated.

Prevalence

Several indicators including results of a substance abuse needs assessment conducted in 1997 show that alcohol is the most widely used substance in Palau, second to tobacco. Preliminary data from the needs assessment show that the 12 month prevalence rate of alcohol use for persons 10 years or older was almost 40 per cent. For males, this rate was 53 per cent.

Economic impact of alcohol

Palau's first household expenditure study, conducted in 1991, found that the mean income for households was US\$ 8000, of which an average of US\$ 669.90 (8.4 per cent) was spent on alcohol.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

The client utilization profile from Palau's sole treatment provider for November 1997 revealed that there were 45 clients receiving services for substance abuse disorders and, of these, 31 were alcohol-dependent only, while another 4 were using alcohol in combination with other drugs. Only 7 of the 45 clients were female.

Morbidity

In 1985, 75 per cent of all emergency room admissions at Palau's only hospital were alcohol-related.

Social problems

Alcohol-related traffic crashes comprised 27 per cent, 26 per cent, and 23 per cent of all traffic crashes recorded in 1994, 1995, and 1996, respectively. Alcohol-related traffic violations remained near seven per cent in all three years. The rate per 1000 population of arrests for driving under the influence of alcohol were 3.5, 2.8 and 3.6 for 1994, 1995 and 1996, respectively.

In 1995, the leading unlawful offence was for drunk and disorderly conduct. In 1996, 348 such citations were issued, second only to grand larceny and malicious mischief.

Alcohol policies

Control of alcohol products

Excise tax increases scheduled to go into effect on 1 January, 1998 doubled the tax on beer to US\$ 0.30 per ounce, increased spirits taxes from US\$ 0.13 to US\$ 0.30 per ounce, and raised wine taxes from US\$ 0.10 to US\$ 0.20 per ounce.

Since 1990, the overall number of alcohol vendor licenses issued throughout Palau has more than doubled from 95 to 199. This increase also reflects a doubling of the number of retail licences per capita in the past ten years, demonstrating that alcohol availability has greatly expanded.

Control of alcohol problems

The legal limit on blood alcohol concentration for all licensed drivers is 0.10 g%.

Alcohol data collection, research and treatment

The Behavioural Health Division of the Ministry of Health is the sole provider of a continuum of treatment programmes in Palau. Both inpatient and outpatient services are provided from detoxification to individual, group and family counselling, case management and aftercare.

Papua New Guinea

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	3,086	3,839	4,302
Adult (15+)	1,760	2,290	2,600
% Urban	13.1	15.0	16.0
% Rural	86.9	85.0	83.9

Health status

Life expectancy at birth, 1990-1995 : 55.2 (males), 56.7 (females)

Infant mortality rate in 1990-1995 : 68 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1160, PPP estimates of GNP per capita (current int'l \$), 1995: 2440.

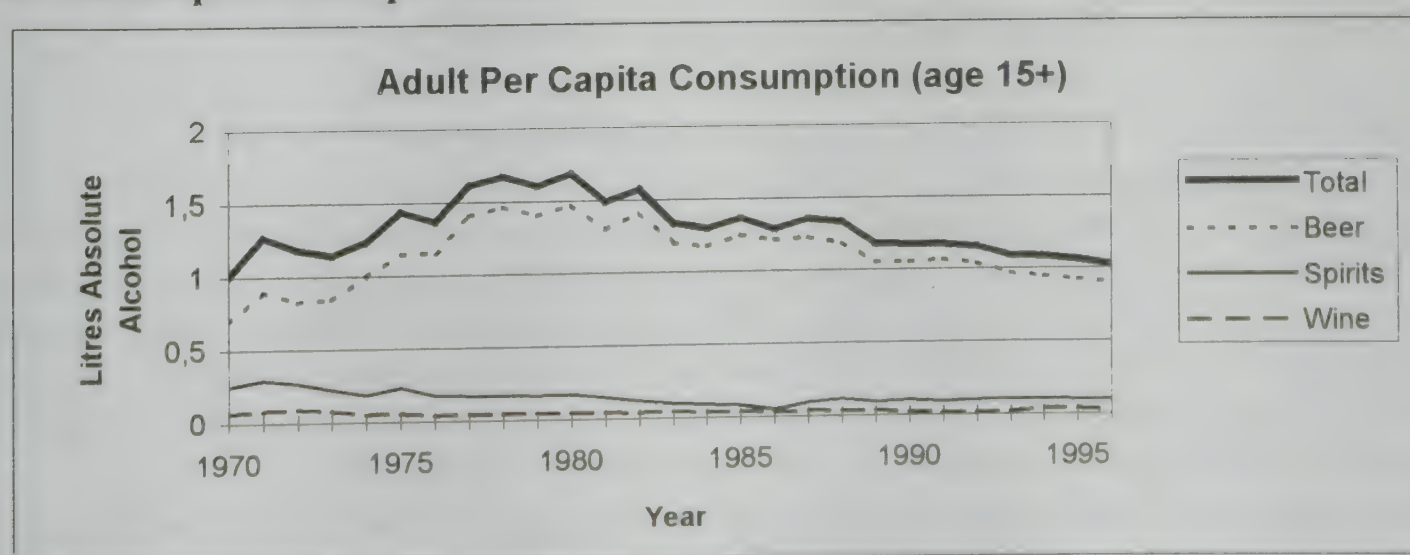
Average distribution of labour force by sector, 1990-1992 : agriculture 76%; industry 10%; services 14%

Adult literacy rate (per cent), 1995 : total 72; male 81; female 63

Alcohol production, trade and industry

South Pacific Brewery is the sole domestic industrial producer of beer, selling beer under its own SP brand as well as brewing and selling San Miguel beer under license to the eponymous Filipino beer producer. Eighty per cent of the shares of the South Pacific Brewery in Papua New Guinea are owned by Asia Pacific Breweries, a joint venture between Heineken, a Netherlands-based brewer, and a Singapore-based soft drink company. Fairdeal Liquors became the first domestic producer of distilled spirits, importing raw materials in order to circumvent high import duties on finished spirits products. Despite an increase in government duty on the imported raw ingredients by 1200 per cent in 1986, Fairdeal by 1990 was still selling its products at roughly half the cost of imports.

Alcohol consumption and prevalence



Consumption

The alcoholic beverage of choice in Papua New Guinea is beer. Recorded spirits and wine consumption comes entirely from imports. There are no data available on the consumption of smuggled or home- or informally-produced alcoholic beverages.

Prevalence

Men are far more likely to drink than women: 86.5 per cent of the women for whom survey data is available reported that they do not drink, as opposed to 22 per cent of men. Males typically drink beer in groups of other men, beginning this practise in their mid to late teens. They do not drink every day, but when they drink weekly or fortnightly, their goal is to get drunk, drink until the alcohol runs out or they pass out. Sizeable quantities of beer (12 or more bottles) are drunk at a sitting.

Age patterns

A survey of the drinking histories and consumption habits of 677 Papua New Guinea high school students with an average age of 16 years found that 39 per cent of males and only 14 per cent of females had tried drinking.

Economic impact of alcohol

Alcohol-related road traffic crashes cost the country K5.6 million in 1988, with a strong probability of a greater amount in 1989.

Mortality, morbidity, health and social problems from alcohol use***Mortality***

Post-mortem records from Port Moresby General Hospital for the years 1976 to 1980 revealed evidence of alcohol ingestion in 85 per cent of drivers involved in traffic crashes. Of these, 86 per cent were male and 82 per cent were below age 35. Another study estimated that in 1979 alcohol consumption was a factor in at least 20 per cent of road traffic fatalities.

Non-traffic fatalities are also often linked to alcohol; the post-mortem study also found that 20 per cent of the non-traffic fatalities had a BAC of greater than 0.08g%. These included 21 per cent of those who died from axe or stab wounds, and nearly 20 per cent of blunt injury victims.

Health problems

Health problems also arise from drinking methylated spirits used to fortify alcohol products sold on the illicit market: at least 11 persons were killed and 13 blinded or otherwise permanently impaired from drinking methylated spirits between 1983 and 1990.

Social problems

Several studies have found a strong relationship between alcohol use and violence. In a 1989 study carried out in the Highlands province of Simbu, violence was observed to be more likely during disputes if drinking had taken place. About 68 per cent of the disputes where alcohol was involved became violent. A Papua New Guinea Report on Law and Order estimated that in 1983, 60 per cent of assault cases were attributable to beer consumption.

A 1981-1982 ten-week survey of 94 victims presenting at Angau Memorial Hospital in Lae due to spouse beating found that 30 per cent of the cases were alcohol-related.

Alcohol policies***Control of alcohol products***

There are 19 provinces in Papua New Guinea, each with its own provincial government, and most of these establish and enforce the laws pertaining to the availability and control of alcoholic beverages. Local licensing regimes have not prevented an explosion in alcohol outlets; from less than 200 licensed premises in 1960, the number of licensed outlets grew to 2100 by 1980 and 2500 by 1990. Numerous unlicensed outlets also exist in many parts of Papua New Guinea where purchases may be made outside of existing hours of sale or in defiance of periodic liquor bans.

Papua New Guinea has banned alcohol advertising in newspapers and other print media, on radio and on television since 1977. Legal advertising is restricted to licensed premises and to officially-

sanctioned sponsorships of sporting events and athletic teams. In response, the brewers have established widely recognized colours and designs for their products. With no mention of beer, these colours advertise the different brands in a universally recognizable way, and bedeck the majority of licensed premises in the country.

Control of alcohol problems

A major means for intervention in alcohol-related problems has been the imposition of temporary liquor bans by both national and provincial governments. Bans have ranged from single or a few days duration to three years in one province. Despite causing an increase in black market activity, liquor bans in some Highland provinces have resulted in a decrease in alcohol-related traffic crashes compared to provinces without such bans.

Alcohol data collection, research and treatment

The government operated an Alcohol Rehabilitation Centre outside of Port Moresby for several years, but closed it in 1987 for lack of funds. There are currently no facilities in Papua New Guinea for the treatment of chronic alcohol dependence.

A forthcoming publication of WHO (Riley and Marshal [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Papua New Guinea.

Philippines (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	48 317 000	60 779 000	67 581 000
Adult (15+)	28 076 000	36 663 000	41 711 000
% Urban	37.5	48.8	54.2
% Rural	62.5	51.2	45.8

Health status

Life expectancy at birth, 1990-1995 : 64.5 (males), 68.2 (females)

Infant mortality rate in 1990-1995 : 44 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 1050, PPP estimates of GNP per capita (current int'l \$), 1995: 2850.

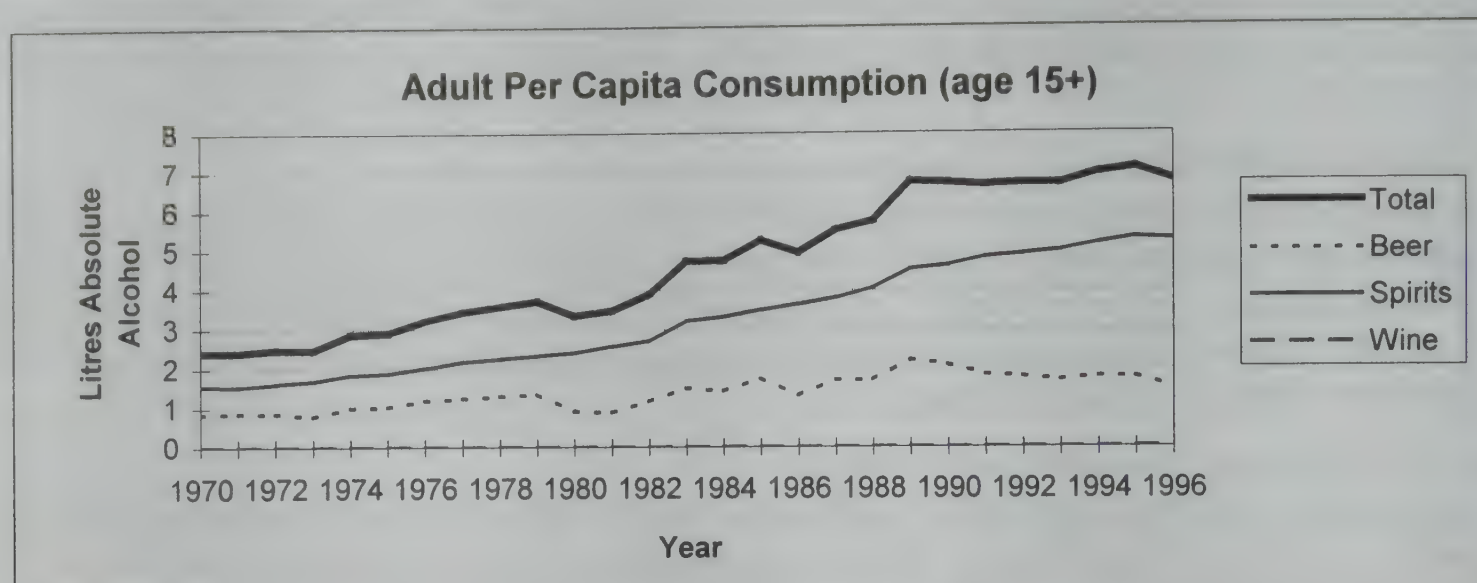
Average distribution of labour force by sector, 1990-1992 : agriculture 45%; industry 16%; services 39%

Adult literacy rate (per cent), 1995 : total 95; male 95; female 94

Alcohol production, trade and industry

The Philippines produces beer and distilled spirits, and imports a small amount of wine. The Philippines beer market is dominated by two companies: San Miguel Corporation, which controls 80 per cent of the market, and Asia Brewery, which controls the remaining 20 per cent. In 1994, the Seagram Company set up a sales, marketing and distribution company in the Philippines, and in 1996, Anheuser-Busch announced a joint venture with Asia Brewery to brew, sell and distribute Budweiser in the Philippines. That same year, Miller Brewing, a US-based subsidiary of the Phillip Morris Companies, announced licensing agreements with San Miguel. Domestic beer sales totalled an estimated 30 billion pesos (US\$ 1.15 billion) in 1995.

Alcohol consumption and prevalence



Consumption

Driven by increases in both beer and distilled spirits consumption, adult consumption of pure alcohol has risen steadily since 1970. Distilled spirits is the alcoholic beverage of choice. There are no data available on consumption of smuggled or home- or informally-produced alcoholic beverages.

Age patterns

From 1989 to 1990, a nationwide survey among 15 082 high school and first and second year college students from the 13 regions of the country was conducted by the Dangerous Drug Board and the University of the Philippines College of Public Health. About 36 per cent of high school students and 34.9 per cent of college students had used alcohol in their lifetime. Of high school students, 2.3 per cent had used alcohol that same day, 5.6 per cent had used alcohol in the past 2 to 7 days, 5 per cent had used alcohol in the past 8 to 30 days, 5.7 per cent had used alcohol in the past 31 to 365 days, and 11.2 per cent had used alcohol more than a year ago. Of college students, 3.7 per cent had used alcohol that same day, 16.2 per cent had used alcohol in the past 2 to 7 days, 14 per cent had used alcohol in the past 8 to 30 days, 10.6 per cent had used alcohol in the past 31 to 365 days, and 18.4 per cent had used alcohol more than a year ago. Urban high school students showed a slightly higher lifetime prevalence of alcohol use than rural students (37.8 per cent compared with 34.5 per cent). Among college students, however, 51.3 per cent of rural students had ever used alcohol, compared with 30.8 per cent of urban students. Male and female lifetime prevalence rates were identical among high school students. Among college students, female lifetime prevalence rates were 35.6 per cent compared with 34.3 per cent for males.

Republic of Korea (the)

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	38 124 000	42 869 000	44 995 000
Adult (15+)	25 163 000	31 792 000	34 375 000
% Urban	56.9	73.8	81.3
% Rural	43.1	26.1	18.7

Health status

Life expectancy at birth, 1990-1995 : 67.3 (males), 74.9 (females)

Infant mortality rate in 1990-1995 : 11 per 1000 live births

Socioeconomic situation

GNP per capita (US\$), 1995: 9700, PPP estimates of GNP per capita (current int'l \$), 1995: 11 450.

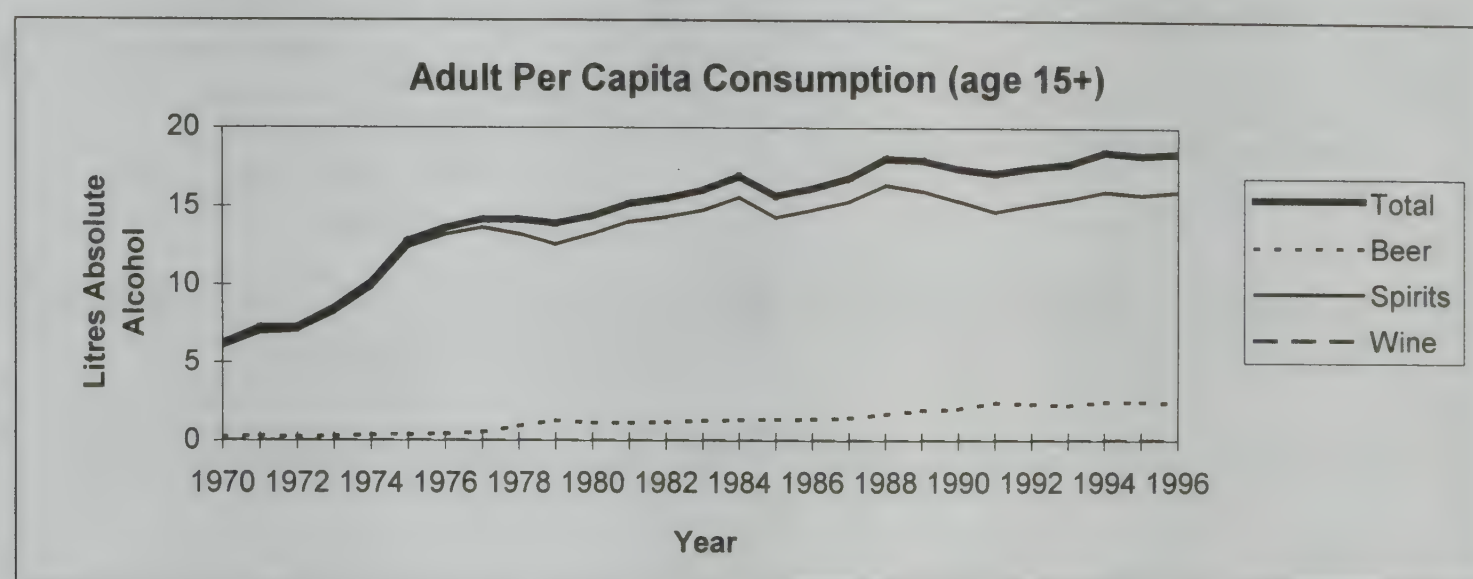
Average distribution of labour force by sector, 1990-1992 : agriculture 17%; industry 36%; services 47%

Adult literacy rate (per cent), 1995 : total 98; male 99; female 97

Alcohol production, trade and industry

South Korea's beer market is controlled by three companies: Jinro-Coors (a joint venture between Coors and Jinro Ltd.), Chosun Brewery Co., and Oriental Brewery Co. Ltd., which has dominated the beer market for decades and currently produces and sells two-thirds of the nation's beer. Oriental markets its own products as well as Budweiser, produced under licence from Anheuser-Busch. South Korea's beer market is valued at US\$ 247 billion, and is expected to grow by 10 to 15 per cent annually. Jinro is also the leading producer of the country's leading distilled spirits product, *soju*, commanding roughly half the market.

Alcohol consumption and prevalence



Consumption

Alcohol consumption in the Republic of Korea has risen steadily and sharply since the 1970s. In 1996 alcohol production increased by 1.3 per cent. Estimated adult per capita consumption of alcohol in 1996 was 13.1 litres of pure alcohol. *Soju* accounted for more than half of pure alcohol consumption, followed by spirits and beer.

Prevalence

Prevalence of drinking alcohol has risen steadily over the last decade. In 1995, one-month prevalence of alcohol drinking was 63.1 per cent (83 per cent for men and 44.6 per cent for women) among adults 20 years or older. Twelve per cent of men and two per cent of women were daily drinkers.

A 1992 survey of a random sample of household heads and their spouses from 989 households in an urban and a rural area found the prevalence of use of alcoholic drinks was 79.8 per cent for men and 26 per cent for women. More drinking was associated with a younger age and a higher level of education.

In 1986, alcohol drinkers comprised an estimated 41 per cent of the total population over 14 years (68 per cent of the male population and 17 per cent of females). Nine per cent of males and 0.8 per cent of females reported drinking daily, and 17 per cent of males and 1.2 per cent of females had two to four drinking episodes in a typical week.

Age patterns

Alcohol drinking among adolescents has increased steadily. In 1995, one-month prevalence of drinking was 7.2 per cent among elementary school students, 11.7 per cent among middle school students and 26.9 per cent among high school students.

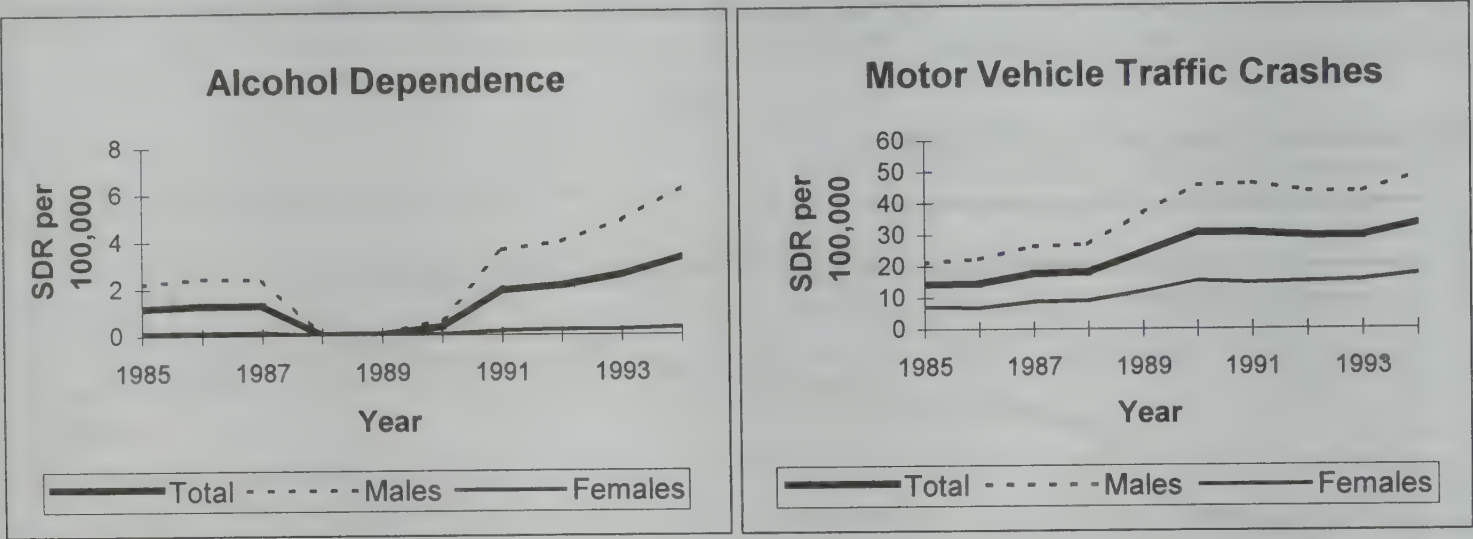
Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

A nationwide epidemiological study conducted in 1986 found lifetime prevalence of alcohol dependence or abuse to be 23 per cent (43 per cent for men and 2 per cent for women). Alcohol dependent persons constituted between seven and eight per cent of psychiatric hospital inpatients in 1986. The male to female ratio was approximately 20 to 1. The SDR per 100 000 population from alcohol dependence has risen rapidly since 1990.

Mortality

In 1995, 18 378 deaths (20 per cent of all deaths) were attributed to alcohol use.



Morbidity

Approximately 18 per cent of total traffic crashes in 1980 occurred because of drunk driving.

Alcohol policies

Control of alcohol problems

Alcohol problems are controlled mainly through punishment for drunk driving, prevention of heavy drinking, and treatment of patients with alcohol dependence. The punishment for drunk driving is sentencing to a correctional house. The Korean government has tried to develop a community prevention and rehabilitation service network for alcohol problems.

Saint Kitts and Nevis

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	42 000	41 000
Adult (15+)	N/A	N/A	N/A
% Urban	35.9	39.6	42.4
% Rural	64.1	60.4	57.6

Socioeconomic Situation

GNP per capita (US\$), 1995: 5170, PPP estimates of GNP per capita (current int'l \$), 1995: 9410

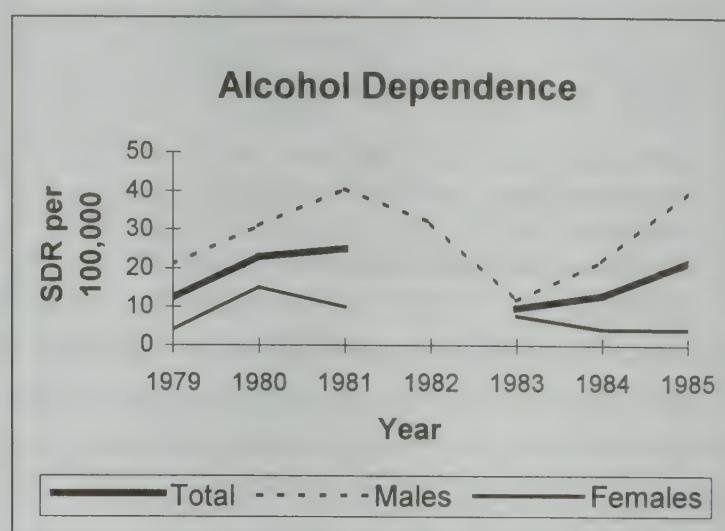
Alcohol production, trade and industry

Saint Kitts and Nevis produce beer, and import spirits and wine.

Mortality, morbidity, health and social problems from alcohol use

Alcohol dependence and related disorders

In 1985, St. Kitts and Nevis reported one of the highest standardized death rates from alcohol dependence in the world. However, it is not known how many of these deaths were full-time residents and how many were from the islands' substantial tourist population. No data are available after 1985.



Samoa

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	159 000	162 000	171 000
Adult (15+)	86 000	95 000	102 000
% Urban	21.2	21.0	21.0
% Rural	78.8	79.0	79.0

Health status

Life expectancy at birth, 1990-1995 : 66 (males), 69.2 (females)

Infant mortality rate in 1990-1995 : 64 per 1000 live births

Alcohol production, trade and industry

The Western Samoa Brewery was established in 1978. The Western Samoa government, which originally held 75 per cent of the brewery's shares, held only 52 per cent by 1984, with 36 per cent held by overseas interests. In the 1980s the brewery acquired the rights to produce San Miguel beer under license.

Alcohol consumption and prevalence

Consumption

Although Samoa produces beer, there are no production figures available.

Economic impact of alcohol

In 1993/1994, Western Samoa Breweries Ltd paid US\$ 3.3 million in excise on its beer production (at the rate of 45 per cent; this increased to 55 per cent from July 1995). Imported alcoholic beverages contributed US\$ 0.5 million in duty and excise that same year totalling to approximately four per cent of all import duties levied. Income tax revenue from liquor sales by hotels, clubs and licensed stores totalled US\$ 1.1 million.

Mortality, morbidity, health and social problems from alcohol use

Alcohol-attributable diseases such as alcohol dependence, alcoholic cardiomyopathy or alcoholic liver cirrhosis did not rank among the leading causes of death or hospital admission in 1992.

Alcohol policies

Control of alcohol products

Locally-produced beer is taxed a domestic excise of 55 per cent, imported beer is subject to duty and excise taxes totalling 115 per cent and spirits are taxed at a rate of 120 per cent. All alcoholic beverages are subject to the 10 per cent value added tax which is imposed on all goods and services. Price controls exist on locally-produced beer, but not on imported beer.

Trading hours are controlled by law, through licence provisions set by local authorities. It is an offence for a person under 21 years of age to possess or consume alcohol on licensed premises or in any other public place. There are no specific restrictions on alcohol advertising. Both local and imported alcoholic beverages carry the health warning label mandated by the USA, reflecting the fact that they are also sold in American Samoa. Both domestically-produced and imported beverages carry alcohol content labelling stating the percentage of alcohol by volume.

Control of alcohol problems

There is no single alcohol programme or policy agency. Alcohol is dealt with briefly in the draft government policy on food and nutrition. Alcohol-related problems are addressed through government agencies such as Health and Police, and alcohol industry matters are dealt with by Customs, Internal Revenue and the Liquor Control Board. In addition, nongovernmental organizations are involved in the broad context of social welfare and social development initiatives.

In the absence of any legislation specifying a maximum BAC for driving, intoxication is determined by behaviour. Preventive services and health education are primarily the work of health personnel, usually in the context of the National Non-Communicable Diseases initiatives and potentially through the Healthy Schools programme.

Alcohol data collection, research and treatment

With the exception of Alcoholics Anonymous which meets in the capital, Apia, and has a mostly expatriate membership, there are no alcohol-specific treatment programmes.

Singapore

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	2,415	2,705	2,848
Adult (15+)	1,761	2,080	2,203
% Urban	100.0	100.0	100.0
% Rural	0.0	0.0	0.0

Health status

Life expectancy at birth, 1990-1995 : 72.4 (males), 77.4 (females)
Infant mortality rate in 1990-1995 : 6 per 1000 live births

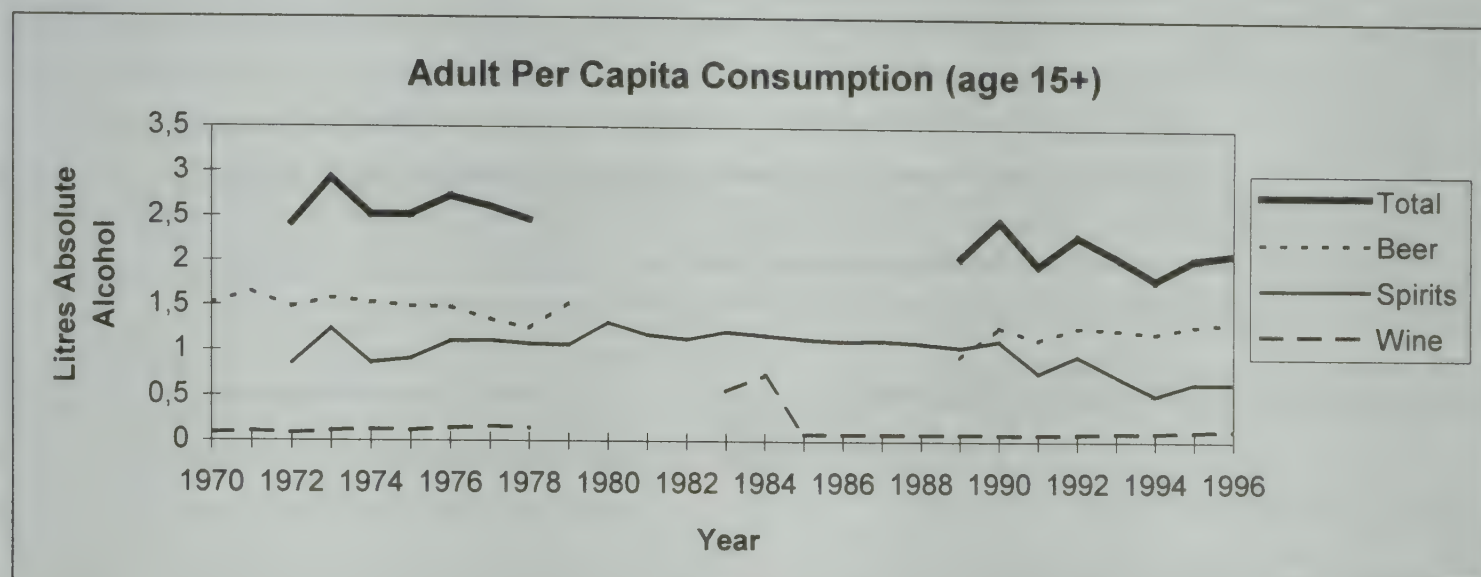
Socioeconomic situation

GNP per capita (US\$), 1995: 26 730, PPP estimates of GNP per capita (current int'l \$), 1995: 22 770.
Average distribution of labour force by sector, 1990-1992 : agriculture 0%; industry 35%; services 65%
Adult literacy rate (percent), 1995 : total 91; male 96; female 86

Alcohol production, trade and industry

Fraser and Neave Ltd. started as a soft drinks company in Singapore in the late 1800s. In 1930 it formed Asia-Pacific Breweries (APB) with Heineken NV. The company established its first brewery in Singapore in 1931 and has been producing Tiger Beer since then. Today, Tiger Beer is the domestic market leader in Singapore, and is a significant export, present in more than 50 countries. Anchor Beer was added to APB's portfolio in 1941 following the acquisition of Archipelago Brewery Company in Singapore. In 1955 the company acquired South Pacific Brewery in Papua New Guinea, which merged with the PNG holdings of San Miguel Brewery in 1983. APB has several joint ventures with Heineken, Guinness and Coca-Cola.

Alcohol consumption and prevalence



Consumption

Singaporeans drink more beer than spirits, and very little wine. Imported beverages are popular in all three beverage categories.

Prevalence

A 1990 survey of 2143 households found that men were far more likely to drink than women. For men, the vast majority of respondents (86.8 per cent of Chinese, 98.9 per cent of Malays, 79.1 per cent of Indians), drank once or twice per month or less, or on special occasions only, or abstained. Very small numbers of people habitually drank six drinks or more per occasion daily or most days (heavy drinking): 0.6 per cent Chinese, 1.3 per cent Indians, and no Malays. Falling into either heavy or moderate drinking categories (drinking daily or most days but less than six drinks per occasion) were 5.5 per cent of Chinese, 0.7 per cent of Malays, and 3.6 per cent of Indians. Light drinkers consuming alcohol once or twice a week but less than six drinks per occasion were 7.7 per cent of Chinese, 0.4 per cent of Malays, and 17.3 per cent of Indians.

Age patterns

In the highest drinking age group, males aged 50 to 59, who were heavy or moderate drinkers, comprised 10.1 per cent of Chinese and 7.7 per cent of Indian respondents.

Mortality, morbidity, health and social problems from alcohol use

Mortality/Morbidity

Between 1987 and 1989 there were approximately 5000 cases of fatal and injury-sustained road traffic crashes, of which between 2.3 and 3.0 per cent were alcohol-related (BAC greater than the legal limit of 0.08 g% ethanol).

Alcohol policies

Control of alcohol problems

In 1985 the government amended the Road Traffic Act, lowering the legal blood ethanol level for drivers from 0.11 g% to 0.08 g%, and at the same time empowered law enforcement to carry out blood

alcohol measurements. In 1990, the law was further amended to include fines of up to US\$ 5330 and imprisonment for no more than 12 months. The law also provided for immediate suspension of driver's licence, pending trial.

Solomon Islands

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	227 000	320 000	378 000
Adult (15+)	119 000	175 000	210 000
% Urban	10.5	14.6	17.1
% Rural	89.5	85.4	82.9

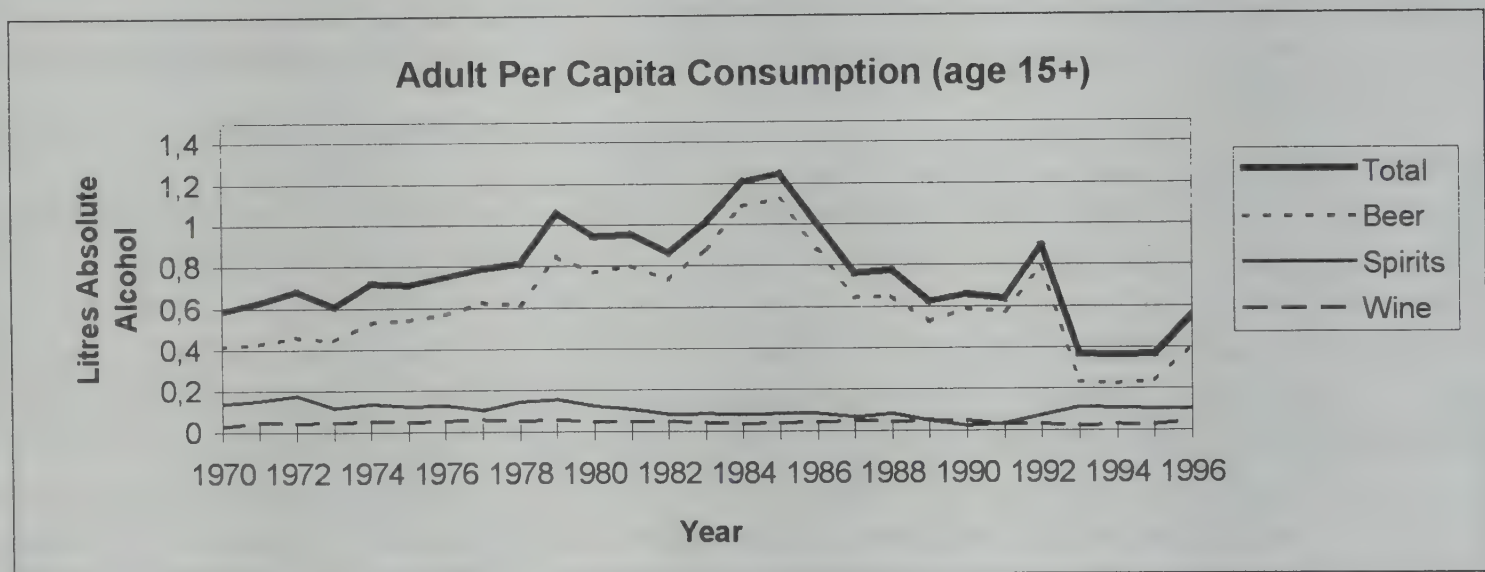
Health status

GNP per capita (US\$), 1995: 910, PPP estimates of GNP per capita (current int'l \$), 1995: 2190.
Life expectancy at birth, 1995 : 63 (males), 65 (females)
Infant mortality rate in 1990-1995 : 27 per 1000 live births

Alcohol production, trade and industry

Prior to 1993 all alcohol consumed in the Solomon Islands was imported. A local brewery began production of beer in mid-1993.

Alcohol consumption and prevalence



Consumption

Beer is the alcoholic beverage of choice. It is generally believed that the unlawful production of alcoholic beverages (homebrew, *toddy* and *kaleve*) is not uncommon, but there are no data available regarding the quantity of production and consumption.

Economic impact of alcohol

Import duties from alcoholic beverages totalled US\$ 2.6 million in 1994. In the same year, locally-produced beer earned tax revenues for the government estimated at US\$ 2.35 million.

Mortality, morbidity, health and social problems from alcohol use

Morbidity

The number of alcohol-related road traffic crashes decreased from 25 to 13 between 1991 and 1995.

Social problems

In 1989 alcohol was involved in 27 out of 37 reported rapes. This figure fell to 26 out of 35 in 1990, to 25 out of 33 in 1991 and to 19 out of 26 in 1992. The number of drunk and disorderly offences rose from 557 to 724 between 1989 and 1991, and then fell to 433 in 1992. In 1992 there were 320 family violence offences reported, 32 per cent of which were classified as alcohol-related.

Alcohol policies

Control of alcohol products

There is a 10 per cent tax imposed on all goods and services, which defines the level of import duty on the raw materials for local beer production. Locally-produced beer is taxed a domestic excise of approximately US\$ 0.92 per litre, imported light beer (three per cent alcohol by volume or lower) is taxed an import duty of about US\$ 1.57 per litre, and imported non-light beer (more than three per cent alcohol by volume) is subject to an import duty of around US\$ 3.14. A 50 per cent concession has been provided, for a period, to the dominant beer importer. Imported spirits of all types are taxed an import duty of approximately US\$ 26.20 per litre, and wine carries an import duty of a tenth of that.

The 1969 colonial-era Liquor Act was amended in a number of respects in 1988. Provisions for the manufacture of alcoholic beverages were introduced with the aim of allowing the Government to better regulate alcohol availability through, for example, controlling the alcohol content of beer. In addition, the provincial Liquor Licensing Boards were established with the aim of enabling local communities, churches and authorities to increase control of liquor availability in their areas by having substantial input into the licensing process. To this end, the Liquor Act has a provision for the lodging of objections against the granting or renewal of a licence.

The minimum legal drinking age is 21 years, having been raised from 18 years in 1988, and it is an offence to sell or otherwise supply liquor to a person under 21 years of age. No specific restrictions apply on alcohol advertising, and alcohol labels do not carry health warnings. Both domestically-produced and imported beverages carry alcohol content labelling providing the per cent of alcohol by volume.

Control of alcohol problems

Legislation specifying a maximum BAC for driving has not been enacted. No alcohol breath testing facilities are available, and police assess intoxication levels behaviourally. There is no single alcohol programme or agency responsible for alcohol policy.

Alcohol-related problems are addressed, however, through Government agencies such as the Ministry of Health & Medical Services, the Ministry of Education & Human Resource Development and the Royal Solomon Islands Police Force. In addition, the churches and a small number of community organizations (especially non-governmental organizations dealing with women's and youth issues, including the National Council of Women and the National Youth Congress) are involved in the broad context of social welfare and social development initiatives.

School education relating to health issues is supported by both pre-service and in-service teacher training. Health education and promotion activities are carried out by health personnel, primarily through the Health Education Unit of the Ministry of Health & Medical Services. Alcohol does not have a high priority in this area, and precedence seems to be given to other areas of health concern, such as nutrition and malaria. Road safety campaigns are conducted, however, and include drunk driving as a key risk factor for road crashes. Primary school students receive alcohol education in Standards Five and Six, as part of the basic curriculum.

Alcohol data collection, research and treatment

There are no formal alcohol-specific treatment programmes. It is rare that either the psychiatric or social welfare staff of the Ministry of Health & Medical Services receive referrals of patients with alcohol-related problems. The newly-formed Family Support Centre is expected to assist families in which alcohol-related problems are prominent.

Tonga

Sociodemographic characteristics

POPULATION	1980	1990	1995
Total	N/A	96 000	98 000
Adult (15+)	N/A	N/A	N/A
% Urban	23.7	35.1	41.1
% Rural	76.3	64.9	58.9

Socioeconomic situation

GNP per capita (US\$), 1995: 1630.

Alcohol production, trade and industry

In 1994, 104 cases of home brewing were reported to police. Illicit production of alcohol is estimated to be very common.

Economic impact of alcohol

In 1994, alcoholic beverages contributed US\$ 1.8 million in customs duty, equalling approximately 14 per cent of all import duty paid. It was estimated that Royal Beer paid about US\$ 500 000 in excise during the same year. Liquor licence fees for Tongatapu contributed US\$ 20 950 to national revenue.

Mortality, morbidity, health and social problems from alcohol use

Social problems

The number of recorded instances of public drunkenness rose from 1126 to 1510 between 1990 and 1992, and then fell to 1047 in 1994.

Alcohol policies

Control of alcohol products

Locally-produced beer is taxed a domestic excise of US\$ 0.75 per litre, and imported beer is subject to a customs duty of US\$ 2.40 per litre, or 200 per cent (whichever is greater). Imported spirits are taxed US\$ 20.00 per litre or 200 per cent.

There is no central liquor licensing body. Decisions on licensing matters are made by the police and the government. Trading hours are controlled by law via license provisions, and the police are responsible for their enforcement. There are no specific restrictions on alcohol advertising. Both domestically-produced and imported beverages carry alcohol content labelling giving per cent of alcohol by volume. The labels on alcoholic beverages do not carry health warnings.

Control of alcohol problems

The minimum legal drinking age is 18 years, and it is an offence for a person under 18 years of age to possess or consume alcohol on licensed premises or in any other public place. Legislation specifying a maximum BAC for driving has not been enacted. No alcohol breath testing facilities are available. Intoxication is determined through assessment by medical officers.

Alcohol is dealt with as part of the National Food and Nutrition Plan which is implemented under the aegis of the National Food and Nutrition Committee. No specific national policy-making processes or structures are in place specific to alcohol. Alcohol-related problems are addressed through Government agencies such as Health, Education and the Police, and alcohol industry matters are addressed by the Ministry of Labour, Commerce and Industries. In addition, churches (especially the Free Wesleyan Church) are involved in the broad context of social welfare and social development initiatives and alcohol education, emphasising the goal of total abstinence. School students receive a small amount of education on alcohol in the health and science curricula.

Alcohol data collection, research and treatment

The Minister of Health is empowered to provide services for the treatment, prevention and rehabilitation of alcohol-dependent persons.

Viet Nam**Sociodemographic characteristics**

POPULATION	1980	1990	1995
Total	53 711 000	66 689 000	74 545 000
Adult (15+)	30 861 000	40 807 000	46 623 000
% Urban	19.3	19.9	20.8
% Rural	80.8	80.1	79.2

Health status

Life expectancy at birth, 1990-1995 : 62.9 (males), 67.3 (females)

Infant mortality rate in 1990-1995 : 42 per 1000 live births

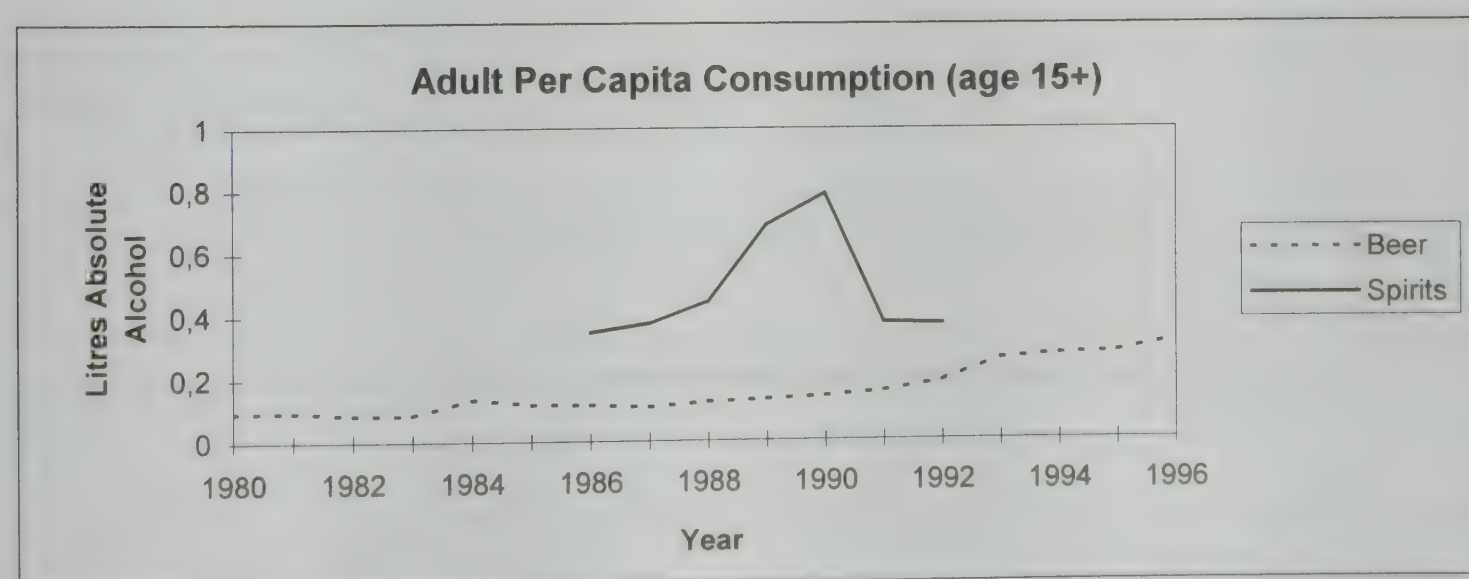
Socioeconomic situation

Average distribution of labour force by sector, 1990-1992 : agriculture 67%; industry 12%; services 21%

Adult literacy rate (per cent), 1995 : total 94; male 96; female 91

Alcohol production, trade and industry

Viet Nam has many small local breweries, which produce beer in small quantities very cheaply. In the early 1990s, as it became clear that the United States would eventually lift its trade embargo (it did so in 1994), a number of foreign brewers established joint ventures with local breweries. Companies currently involved in joint ventures in Viet Nam include Guinness, Heineken (through Asia Pacific Breweries), Carlsberg, Stroh and San Miguel. In addition, Viet Nam's Hue Brewery has begun marketing Hue Beer in the United States. Local development agencies such as the Viet Nam Investment and Development Bank, as well as foreign agencies such as the Danish Industrialization Fund for Developing Countries, have assisted in modernizing breweries and promoting joint ventures.

Alcohol consumption and prevalence**Consumption**

Data are only available regarding spirits and beer production. Survey data indicate that wine is the alcoholic beverage of choice, but there are no data available regarding wine production or trade.

Prevalence

Epidemiological surveys have been carried out in 21 sites, including rural, urban and mountainous areas covering a total population of 80 892. Most of those who eventually abuse or become dependent on alcohol began drinking between the ages of 21 and 30. Initiation in adolescence is rare. White wine is the most commonly used beverage, followed by beer. Abusers tend to drink frequently; from 50 to 100 per cent reported drinking daily, and most reported drinking with evening meals.

Mortality, morbidity, health and social problems from alcohol use***Alcohol dependence and related disorders***

The percentage of alcohol abuse in cities (between 5 and 10.4 per cent of the population) and in mountainous areas (between 7 and 9.7 per cent of the population) is much higher than that in rural areas (between 0.57 and 1.2 per cent). The ratio of alcohol dependent people is also higher in urban (1.16 to 3.61 per cent) and mountainous (2.34 per cent) than rural areas (0.14 to 0.42 per cent). Alcohol dependence and abuse among women is much lower than among men.

Social problems

In the epidemiological surveys, between 10 and 80 per cent of users reported fighting after drinking. From 8.4 to 18 per cent reported family break-ups as a result of alcohol use. In one study, 31.8 per cent of users reported losing a job due to their drinking.

Alcohol policies***Control of alcohol products***

There are no limits on free sampling, billboard or broadcast advertising, or sporting or social event sponsorships in order to market beer. The government announced in March 1994 that it would limit further foreign investment in beer production until the year 2000.

References

Abiodun OA (1996) Alcohol-related problems in primary care patients in Nigeria. *Acta psychiatrica Scandinavica*, 93:235-239.

Acuda SW, Eide AH (1994) Epidemiological study of drug use in urban and rural secondary schools in Zimbabwe. *Central African journal of medicine*, 40:207-212.

Adelekan L, et al. (1993) Psychosocial correlates of alcohol, tobacco and cannabis use: findings from a Nigerian university. *Drug and alcohol dependence*, 33:247-256.

Adlaf EM, et al. (1995) *The Ontario student drug use survey: 1977-1995*. Addiction Research Foundation, Toronto.

Alcohol and Drug Information Centre (1993) *Substance abuse among school children in six districts of Sri Lanka*. Summary of a research study carried out by Alcohol and Drug Information Centre. Colombo.

Anderson P (1995) *Alcohol and risk of physical harm*. In: Holder HD, Edwards G, eds. *Alcohol: evidence and issues*. Oxford, England: Oxford University Press, 82-113.

Andreasson S, Allbeck P, Römelsjö A (1988) Alcohol and mortality among young men: longitudinal study of Swedish conscripts. *British medical journal*, 296, 1021-1025, 1988.

Barry K. (1998) Global wine market undergoes a major international evolution. *Impact international* 13(2):1-12, 15 January 1998.

Beck A, et al. (1993) *Survey of state prison inmates, 1991*. Washington DC, US Bureau of Justice Statistics (US Government Printing Office).

Beegom R, et al. (1995) Diet, central obesity and prevalence of hypertension in the urban population of South India. *International journal of cardiology*, 51:183-191.

Bejarano J, et al. (1996) *Consumo de drogas en Costa Rica. Resultados de la encuesta nacional de 1995*. Instituto Sobre Alcoholismo Y Farmacodependencia. Departamento de Investigación.

Bejarano J, Alvarado R (1997) *Consumo de tabaco, alcohol y otras drogas en Costa Rica. Distribución geográfica 1995*. Instituto Sobre Alcoholismo y Farmacodependencia. San José, Costa Rica.

Blackwelder WC, et al. (1980) Alcohol and mortality: the Honolulu Heart Study. *American journal of medicine*, 68: 164-9.

Bloomberg News (1997) *Indians toast prohibition's end*. International Herald Tribune, 5 June 1997:17.

Boedhi-Dermojo R, et al. (1990) A study of baseline risk factors for coronary heart disease: results of population screening in a developing country. *Rev. Epidemiology-Sante-Publique*, 38:487-491.

- Boffetta P, Garfinkel L (1990) Alcohol drinking and mortality among men enrolled in an American Cancer Society prospective study. *Epidemiology*, 1:342-8.
- Bogousslavsky J, et al. (1990) Alcohol consumption and carotid atherosclerosis in the Lausanne Stroke Registry. *Stroke*, 21:715-720.
- Bower CD (1992) Physical effects of alcohol. *Psychiatry in Practice* 6-7.
- Boyd J (1998) Memorandum to World Health Organization, Geneva, 20 March 1998.
- Brazeau R, Burr N (1993) *Alcoholic beverage taxation and control policies*. Eighth Edition. Ottawa, Ontario, Brewers Association of Canada.
- Bruun K et al. (1975) *Alcohol control policies in public health perspective*, Helsinki: Finnish Foundation for Alcohol Studies, Volume 25, 1975.
- Buda B (1987) *Research and action programmes going on in Hungary concerning the epidemiology, prevention and treatment of alcoholism and alcohol-related problems*. Paper presented at the second meeting of principal investigators in the World Health Organization Collaborative Study on Community Response to Alcohol-Related Problems, Lisbon, June 1987 (unpublished document ICP/ADA 107/9).
- Butau T (1992) *An investigation of practices, knowledge and learning needs of workers at the Parirenyatwa Hospital with special reference to substance abuse* [Dissertation]. Harare, Zimbabwe, University of Zimbabwe.
- Camacho TC, Kaplan GA, Cohen RD (1987) Alcohol consumption and mortality in Alameda County. *Journal of chronic diseases*, 40:229-36.
- Casswell S (1997) Reply to a questionnaire on the alcohol situation in New Zealand from the World Health Organization Regional Office for Europe, Copenhagen, 1997.
- Cavanagh J, Clairmonte F. (1985) *Alcoholic Beverages: Dimensions of Corporate Power*. New York, St Martin's Press.
- CDC (1995) [Centers for Disease Control and Prevention] Update: alcohol-related traffic crashes and fatalities among youth and young adults – United States, 1982-1994; Morbidity and mortality weekly report, 44:869-74.
- CSAP (1997) [Center for Substance Abuse Prevention] *Descriptions of substance abuse problems, available Problem Indicator, Problem Indicator Data and Cost Estimation*. Rockville, MD. Substance Abuse and Mental Health Services Administration.
- Cesabek-Travnik Z (1995) Reply to a questionnaire on the alcohol situation in Slovenia from the World Health Organization Regional Office for Europe, Copenhagen, October 1994 with an update in 1995.
- Cheng AT (1995) Mental illness and suicide. A case-control study in East Taiwan. *Archives of general psychiatry*, 52(7):594-603.
- Chinyadza E et al. (1993) *Alcohol problems among patients attending five primary health care clinics in Harare city*. *Central African journal of medicine*, 39:26-32.
- Collins DJ, Lapsley HM (1991) *Estimating the economic costs of drug abuse in Australia*, Commonwealth Department of Community Services and Health, Canberra.

- Collins J, Schlenger W (1988) Acute and chronic effects of alcohol use on violence. *Journal of studies on alcohol* 49:516-521.
- Colson E, Scudder T (1988) *For Prayer and Profit*. Stanford, Stanford University Press.
- Commission of the European Community [Europe Against Cancer Programme] (1990) Europe Against Cancer Programme, Young Europeans, Tobacco and Alcohol. Brussels.
- Conseil Nacional de Drogas CND (1997) [National Council on Addictions] National Household Survey 1996, Preliminary Report. Caracas, Conseil Nacional de Drogas.
- Cook, P (1981) *Effect of liquor taxes on drinking, cirrhosis, and auto accidents*. pp. 225-285 in MH Morre and DR Gerstein eds., *Alcohol and public policy: beyond the shadow of prohibition*. Washington DC: National Academy Press, 1981.
- Cook P, Moore M (1993) Violence reduction through restrictions on alcohol availability. *Alcohol health and research world* 17:151-156.
- Corrarao G, et al. (1997) Trends of liver cirrhosis mortality in Europe, 1970-1989: Age-period-cohort analysis and changing alcohol consumption. *International journal of epidemiology*. 25:100-109.
- Cotrim B (1997) Paper presented at the Alcohol Policies in Developing Societies editorial group meeting, Mexico City, 26-20 April 1997.
- Deev A, et al. (1998) Association of alcohol consumption to morality in middle-aged U.S. and Russian men and women. *Annals of epidemiology*. 8(3):147-53.
- de Labry LO, et al. (1992) Alcohol consumption and mortality in an American male population: recovering the U-shaped curve-findings from the Normative Ageing Study. *Journal of studies on alcohol*, 53:25-32.
- de Lint J (1981) Alcohol consumption and liver cirrhosis mortality. The Netherlands. *Journal of studies on alcohol* 42:48-56.
- Del Castillo FA, Salinas NF (undated) *El uso indebido de drogas en Bolivia estudio comparativo (población urbana 1992-1996)*. Centro Latinoamericano de Investigación Científica. Celin, Bolivia.
- Development Associates, Inc. (1990) *Drug awareness needs assessment for Guatemala: final report*. Narcotics Awareness and Education Project. Submitted to: Office of Programs, Office of Human Resource Development, Guatemala. 29 November 1990.
- Development Associates, Inc. (1991) *National study of drug prevalence and attitudes toward drug use in Haiti: revised final report*. Narcotics Awareness and Education Project. Submitted to: the Association for the Prevention of Alcoholism and Other Chemical Dependencies. Port-au-Prince. 14 June 1991.
- Doll R, et al. (1994) Mortality in relation to consumption of alcohol: 13 years' observations on male British doctors. *British medical journal*, 309:9011-8.
- Donahue RP, et al. (1986) Alcohol and hemorrhagic stroke: the Honolulu Heart Program. *JAMA - Journal of the American medical association*; 2311-4.
- Drugs of Dependence Branch (1996) Commonwealth Department of Human Services and Health (Canberra, Australia). *National drug strategy household survey: survey report 1995*. Australian Government Publishing Service, Canberra.

- Duflou JALC, Lamont DL, Knobel GJ (1988) Homicide in Cape Town, South Africa. *American journal of forensic medicine and pathology*, 9(4):290-294.
- Dufour M, Caces F (1993) Epidemiology of the medical consequences of alcohol. *Alcohol health and research world* 17:265-271.
- Dunn J, Laranjeira R (1996) Memorandum to World Health Organization, Geneva, 15 November 1996.
- Edwards G, et al. (1994) *Alcohol policy and the public good*. Oxford medical publication. Oxford university press.
- Egorov V (1995) Reply to a questionnaire on the alcohol situation in the Russian Federation from the World Health Organization Regional Office for Europe, Copenhagen, 1994, with an update by Dr. Egorov and Dr. V.E. Pelipas in September 1995.
- Eide AH, Acuda SW (1996) Cultural orientation and adolescents' alcohol use in Zimbabwe. *Addiction*, 91(6), 807-14.
- English DR, et al. (1995) *The quantification of drug caused morbidity and mortality in Australia, 1995 edition*. Commonwealth Department of Human Services and Health, Canberra. Produced by the Australian Government Publishing Service.
- ESPAD (1997) [Europe School Survey Project on Alcohol and Other Drugs] Copenhagen World Health Organization Office for Europe. Unpublished data.
- Farchi G, et al. (1992) Alcohol and mortality in the Italian rural cohorts of the Seven Countries Study. *International journal of epidemiology*, 21:74-81.
- Farrell S. (1985) *Review of national policy measures to prevent alcohol-related problems*. World Health Organization, Geneva.
- Fekete J (1995) *Trends and consequences of alcohol consumption in Hungary, 1995, special issue of József Nép, (in collaboration with the National Institutes of Alcoholology and of Health Promotion, and the Chamber of Society in Hungary)* Sober Life National Association for Health and Family Protection, Budapest.
- Fergusson DM, Lynskey MT, Horwood LJ (1994) Alcohol consumption and associated problems in a birth cohort of 15 year olds. *New Zealand medical journal*, 107(977):167-70.
- Ferrer X, et al. (1995) *Phare multi-country programme on drugs; European commission. Drug demand reduction in the Central and Eastern European countries - second regional report*. Intersalus & ABS, Barcelona.
- Fillmore KM, et al. (1998a) Alcohol consumption and mortality. III. Studies of female populations. *Addiction*, 93(2):219-29.
- Fillmore KM, et al. (1998b) Alcohol consumption and mortality. I. Characteristics of drinking groups. *Addiction*, 93(2):183-203.
- Fleming D (1998) World's leading drinks companies weigh options on future alliances. *Impact International* 13(20&21): 1-20, 15 October & 1 November 1998.
- FAO (1998) [Food and Agriculture Organization of the United Nations] FAOSTAT Statistics Database. Website <http://apps.fao.org>

- Friedman LA, Kimball AW (1986) Coronary heart disease mortality and alcohol consumption in Framingham. *American journal of epidemiology*, 124:481-9.
- Fuchs CS, et al. (1995) Alcohol consumption and mortality among women. *New England journal of medicine*, 332:1245-1250.
- Garrison C, et al. (1993) Aggression, substance use and suicidal behaviours in high school students. *American journal of public health*, 83:179-184.
- Gaziano JM, et al. (1993) Moderate alcohol intake, increased levels of high-density lipoprotein and its subfractions, and decreased risk of myocardial infarction. *New England journal of medicine*, 329:1829-1834.
- Gefou-Madianou D (1994) Reply to a questionnaire on the alcohol situation in Greece from the World Health Organization Regional Office for Europe, Copenhagen, October 1994.
- Giesbrecht N, et al. (1989) eds. *Drinking and casualties, accidents, poisonings and violence in an international perspective*. London and New York, Tavistock/Routledge.
- Gili Miner M, Giner Ubago J (1987) *Community response to alcohol-related problems: results of the general population survey, Seville, Spain*. Paper presented at the Second Meeting of Principal Investigators in the World Health Organization Collaborative Study on Community Response to Alcohol-Related Problems, Lisbon, June 1987 (unpublished document ICP/ADA 017/14b).
- Gleser J (1994) Reply to a questionnaire on the alcohol situation in Israel from the World Health Organization Regional Office for Europe, Copenhagen, October 1994.
- Gordon T, Doyle JT (1987) Drinking and mortality: the Albany Study. *American journal of epidemiology*, 125:263-70.
- Grant B, Dufour M, Harford, T (1988) Epidemiology of alcoholic liver disease. *Seminars in liver disease*, 8:12-25.
- Greenfield T (1995) *Who drinks most of the alcohol in the U.S.? The policy implication*. Alcohol Research Group. Berkeley, Ca. Source: Presented at the 39th International Institute on the Prevention and Treatment of Alcoholism, International Council on Alcohol and Addiction, Trieste, Italy, 11-16 June 1995.
- Greenfield TK (1997) Warning labels: Evidence on harm reduction from long-term American surveys. In: Plant M, Single E, Stockwell T, eds. *Alcohol: Minimising the Harm. What Works?* New York, Free Association Books Ltd, 1997 (pp. 105-125).
- Gruenewald P, Ponicki W (1995) The relationship of alcohol sales to cirrhosis mortality. *Journal of studies on alcohol*. 56:635-641.
- Gruenewald P, Ponicki W, Mitchell P (1995) Suicide rates and alcohol consumption in the United States, 1970-1989. *Addiction* 90:1063-1075.
- Gunasekera RGGO, Perera MRC (1997) *Assessing the impact of drug use on programmes for alleviating poverty: survey report*. Sober Sri Lanka, Colombo.
- Hao W, Young D (1997) *Alcohol drinking and drinking related problems in five cities in China*. Hunan Medical University, China.

- Harkin AM (1995) *Profiles of alcohol consumption in the Member States of the European Region of the World Health Organization*, World Health Organization Regional Office for Europe, Copenhagen, ICP/ALDT 94 03 CN01/BD4. Presented at the European Conference on Health, Society and Alcohol, Paris, 12-14 December 1995.
- Harkin AM, et al. (1997) *Smoking, drinking and drug taking in the European region*. World Health Organization Regional Office, Copenhagen.
- Harwood H, et al. (1998) *The economic costs of alcohol and drug abuse in the United States, 1992*. Washington, D.C., National Institute on Drug Abuse Office of Science Policy and Communications and the National Institute on Alcohol Abuse and Alcoholism Office of Policy Analysis.
- Hauge R (1988) The effects of changes in availability of alcoholic beverages. In Laurence M, Snortum J, Zimring F, eds. *Social control of the drinking driver*. (pp. 169-187), Chicago, University of Chicago Press.
- Haworth A (undated) *Medical and social consequences of alcohol consumption in Zambia*. University of Zambia. Lusaka.
- Herman A (1987) Personal communication. Cited in: Medina-Mora ME, et al. Epidemiologic status of drug abuse in Mexico. *Bulletin of PAHO*, 1990: 24(1).
- Hettige ST (1991) *Alcoholism, Poverty and Health in Rural Sri Lanka: Some Empirical Evidence*. Paper presented at the International Congress on Alcoholism and the Addictions, Stockholm, 2-7 June 1991.
- Hibell B, et al (1997) The 1995 ESPAD Report. Alcohol and Other Drug Use Among Students in 26 European Countries. The Swedish Council for Information on Alcohol and Other Drugs, CAN. Council of Europe. Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drug (Pompidou Group). Stockholm.
- Hill D, et al. (1993) Tobacco and alcohol use among Australian secondary school students in 1990. *The medical journal of Australia*, 158:228-233.
- Hill TW (1984) "Ethnohistory and alcohol studies" pp. 313-337 in Galenter, MM, ed. *1984 Recent Developments in Alcoholism*, v.2. New York: Plenum Press.
- Hoo SK, Navaratnam V (1988) *Kajian Tentang Ilmu Pengetahuan kesihatan dan Sikap Terhadap Penggunaan Dadah Pelajar Sekolah menengah*, Pusat Penyelidikan Dadah dan Ubat-Ubatan, Universiti Sains Malaysia.
- Huby G (1994) *Drinking and the management of problem drinking among the Bari, Southern Sudan*. In: McDonald M (Ed.). *Gender, Drink and Drugs*, Oxford, UK. Berg Publishers.
- Hughes K et al. (1990) Alcohol consumption in Chinese, Malays and Indians in Singapore. *Annals academy of medicine* 19:330-332.
- Hurst W, Gregory E, Gussman T (1997) *Alcoholic beverage taxation and control policies*. Ninth Edition. Ottawa, Ontario, Brewers Association of Canada, August 1997.
- Impact Databank (1995) *Worldwide Spirits Report*. New York, 1995, Shanken Communications.
- Impact International (1997) *Russia's brewing industry gets an exemption on new tax rules*. Impact International, 12(2): 17, 15 January 1997. New York.

- Indran SK (1993) Pattern of alcoholism in the general hospital, Kuala Lumpur. *Medical journal of Malaysia*, 48:129-134.
- Inge MB, et al. (1997) Alcohol use and problem drinking: prevalences in the general Rotterdam population. *Substance use and misuse*, 32(11):1491-1512.
- IARC (1988) [International Agency for Research on Cancer] IARC monographs on the evaluation of carcinogenic risks to humans. Vol. 44. Alcohol drinking. Lyon, IARC, 1988.
- ISPA (1993) [Institut Suisse de Prévention de l'Alcoolisme et autres toxicomanies] *Chiffres et donnée sur l'alcool et les autres drogues* (Data Statistics on alcohol and other drugs), Lausanne.
- Jackson R, Scragg R, Beaglehole R (1991) Alcohol consumption and the risk of coronary heart disease. *British medical journal*, 303, 211-216.
- Jernigan D (1997) *Thirsting for markets: the global impact of corporate alcohol*. San Rafael, California, The Marin Institute, 1997.
- Johnson DM, Walz MC (1994) Preliminary assessment of the impact of lowering the illegal *per se* limit to 0.08 in five states. Washington DC, National Highway Traffic Safety Administration, 1994.
- Jovev J (1993) *Current situation of Alcoholism, Drug addiction and Nicotinism in the Republic of Macedonia*. Paper delivered at a World Health Organization Consultation Meeting in Bulgaria, December 1993.
- Jutkowitz JM, et al. (1992a) *Survey on drug prevalence and attitudes in the Dominican Republic*, Arlington, Narcotics awareness and education project.
- Jutkowitz JM, et al. (1992b) *Survey on drug prevalence and attitudes in urban Panama*. Narcotics awareness and education project.
- Jutkowitz JM, Hongsook E (1994) Drug prevalence in Latin America and Caribbean countries: a cross-national analysis. *Drugs: education, prevention and policy*, 1(3):199-251.
- Kauhanen J, et al. (1997) Beer bingeing and mortality: results from the Kuopio ischaemic heart disease risk factors study, a prospective population-based study. *British medical journal* 315:846-851.
- Kebede D, Ketsela T (1993) Suicide attempts in Ethiopian adolescents in Addis Ababa high schools. *Ethiopian medical journal*, 31:83-90.
- Kiechl S, et al. (1996) Insulin sensitivity and regular alcohol consumption: large prospective, cross sectional population study (Bruneck study). *British medical journal*, 313:1040-4.
- Klatsky AL, Armstrong MA, Friedman GD (1989) Alcohol use and subsequent cerebrovascular disease hospitalizations. *Stroke*, 20:741-6
- Klatsky AL, Armstrong MA, Friedman GD (1990) Risk of cardiovascular mortality in alcohol drinkers, ex-drinkers and non drinkers. *American journal of cardiology*, 66:1237-42.
- Klatsky AL, Armstrong MA, Friedman GD (1997) Red wine, white wine, liquor, beer, and risk for coronary artery disease hospitalization. *American journal of cardiology*, 80:416-20.
- Kono S, et al (1986) Alcohol and mortality a cohort study of male Japanese physicians. *International journal of epidemiology*, 15:527-32

- Kortteinen, T (1986) Utilization of agricultural produce in the production of alcohol – world trends 1961-1983. *Contemporary drug problems*. 13:679-706. Winter 1986.
- Krasovsky C, Viyevskiy A (1994) Reply to a questionnaire on the alcohol situation in Ukraine from the World Health Organization Regional Office for Europe, Copenhagen.
- Leifman H, Römelsjö A (1997) A time series analysis of the association between alcohol consumption and admissions and mortality in alcoholism, alcohol intoxication, alcohol psychosis and liver cirrhosis. *Addiction*, 92:1515-1528.
- Leino EV, Römelsjö A (1998) Alcohol consumption and mortality. II. Studies of male populations. *Addiction*, 93(2):205-18.
- Lenke L (1990) *Alcohol and criminal violence: Time series analysis in a comparative perspective*. Stockholm, Almquist and Wiksell International.
- Leon DA, et al. (1997) Huge variation in Russian mortality rates 1984-1994: artefact, alcohol, or what? *Lancet*, 350:383-388.
- Lerer LB (1992) Women, homicide and alcohol in Cape Town, South Africa. *Forensic sciences international*, 55:93-99.
- Lesotho Highlands Water Project (1996a) LHDA Contract 1010 Baseline Epidemiology and Medical Services Survey Phase 1B.
- Lesotho Highlands Water Project (1996b) LHDA Contract 74 Baseline Epidemiological Survey Phase 1A.
- Loftus I, Dada M (1992) A retrospective analysis of alcohol in medicolegal postmortems over a period of five years. *The American journal of forensic medicine and pathology*. 13(3):248-252.
- Madianou D, et al. (1987) *Drinking patterns and alcohol-related problems in three age groups: preliminary results*. Paper presented to the World Psychiatric Association Regional Symposium, Warsaw, November 1987.
- Maniam T (1994) Drinking habits of Malaysians in general practice. *Medical journal of Malaysia*, 49:369-374.
- Marmot M, Brunner E (1991) Alcohol and cardiovascular disease: the status of the U-shaped curve. *British medical journal*, 303:565-8.
- Marshall M (1987) *A survey of alcohol use in Truk, Federated States of Micronesia*. A paper prepared for the International Council on Alcohol and Addictions Epidemiology Section Annual Meeting, 7-12 June, 1987. Aix-en Provence, France.
- Marshall M (1997) *Country profile of alcoholic beverages in Papua New Guinea*. Unpublished paper. World Health Organization, Geneva.
- Matos E, et al. (1996) *Epidemiological studies of chronic diseases in developing countries*. Study funded by Clinical Trial Service Unit (CTSU), Oxford, U.K. April 1996.
- Maula J (1997) *Small-scale production of food and traditional alcoholic beverages in Benin and Tanzania: Implications for the promotion of female entrepreneurship*. Helsinki: Finnish Foundation for Alcohol Studies, Vol 43.

- McKee, M, Britton A (1998) The positive relationship between alcohol and heart disease in Eastern Europe: potential physiological mechanisms. *Journal of the royal society of medicine*, 91:402-407.
- McKenzie D, Williams B, Single E (1997) *Canadian profile: alcohol, tobacco & other drugs*. Toronto, Ontario: Canadian Centre on Substance Abuse, Addiction Research Foundation.
- Medina-Mora ME, et al. (1990) Epidemiologic status of drug abuse in Mexico. *Bulletin of PAHO*, 24(1).
- Medina-Mora ME (1997) *Alcohol policies in developing countries. Mexican report*. Paper prepared for the Alcohol Policies in Developing Countries Project Meeting, Mexico City, April 1997.
- Mendoza OM, Ponce EC (1991) *Prevalence of drug and substance abuse among Filipino secondary and college students*. Report of a USAID-sponsored project. Quezon City.
- Meursing K, Morojele N (1989) Use of alcohol among high school students in Lesotho. *British journal of addiction*, 84:1337-1342.
- Miguez HA, Pecci MC (1997) *The epidemiology of drug and alcohol abuse in Paraguay*. Comite Paraguay-Kansas. Agency for International Development. Development Associates, Inc. November 1997.
- Miller GJ, et al. (1990) Alcohol consumption: protection against coronary heart disease and risks to health. *International journal of epidemiology*, 19:923-30.
- Miller TR, Lestina DC, Spicer RS (1998) Highway crash costs in the United States by driver age, blood alcohol level, victim age, and restraint use. *Accident analysis and prevention*, 30(2):137-150.
- Minghao H, et al. (unpublished) Privatizing alcohol sales and alcohol consumption: evidence and implications, *Addiction*, (Forthcoming).
- Ministry of Health and Welfare (1998) Memorandum to World Health Organization, Geneva, 20 February 1998. Republic of Korea.
- Ministry of Public Health (1997) Health in Thailand 1995-1996. Bureau of Health Policy and Plan, Ministry of Public Health, Thailand.
- Mohan D, et al. (1992) *Integrating alcohol, tobacco and other drugs in survey research*. Department of Psychiatry and Drug Dependence Treatment Centre, New Delhi, 1992.
- Moreira LB, et al. (1996) Alcoholic beverage consumption and associated factors in Porto Alegre, a southern Brazilian city: a population-based survey. *Journal of studies on alcohol*, 57:253-59.
- Moser J (1980) *Prevention of alcohol-related problems: an international review of preventive measures, policies and programmes*. Toronto, Alcoholism and Drug Addiction Research Foundation.
- Moser J, ed. (1985) *Alcohol policies in national health and development planning: Review based on the 1982 technical discussions*. WHO Offset Publication No. 89. Geneva, Switzerland: World Health Organization 1985.
- Moser J (1992) *Alcohol problems, policies and programmes in Europe: A report of a study*. World Health Organization Regional Office for Europe, Copenhagen, EUR/ICP/ADA 011.
- Moses PF (1989) The use and abuse of alcohol in Zimbabwe. *Contemporary drug problems*, 16:71-80.

- Murphy G, Wetzel R (1990) The lifetime risk of suicide in alcoholism. *Archives of general psychiatry*, 47:383-392.
- Murray C, Lopez A (1996) *The global burden of disease*. London, Oxford University Press.
- Myers ML, et al. (1981) *Staff report on the cigarette advertising investigation*. Washington DC, Federal Trade Commission.
- Nadim AA, Rahim SIA (1984) Clinical aspects of alcohol addiction in the Sudan: 1 January 1979-31 December 1979. *British journal of addiction*, 79(4):449-450.
- Nakamura K, Tanaka A, Takano T (1993) The social cost of alcohol abuse in Japan. *Journal of studies on alcohol*, 54(5):618-25.
- Narusk A (1991) Transmission of Drinking Problems within the Family. *Contemporary drug problems*, 18(4): 645-671.
- National Food and Nutrition Committee (1995) *1993 National Nutrition Survey: Main Report*, prepared by shoko Saito, Suva, 1995.
- Navarro LC (1997) *Estudio nacional del consumo de drogas en la poblacion escolar de chile - estimaciones poblacionales: informe final marzo 1997*. Ministerio de Educacion, Ministerio de Salud.
- Nordic Alcohol Statistics (1995) *Nordisk Alkoholtidskrift*, Vol. 12.
- Norström T (1987) The impact of per capita consumption on Swedish cirrhosis mortality. *British journal of addiction*, 82:67-75.
- Norström T (1988) Alcohol and suicide in Scandinavia. *British journal of addiction*, 83:553-559.
- O'Connor J, Daly M (1983) *The smoking habit*. Dublin, Health Education Bureau.
- Obot IS (1993) *Drinking behavior and attitudes in Nigeria: a general population survey (in the Middlebelt Region)*. Jos: C.D.S. Monograph Series No., 1/93, University of Jos, Nigeria.
- Orjes J (ed) (1997) *Hudiksvalls Tidning*.
- Ortega J (1993) *Drunk driving in Peru, a statistical and sociological analysis*. Paper presented to the 19th Annual Alcohol Epidemiology Symposium of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol, Krakow, Poland, 7-11 June 1993.
- Ospina ER (1997) *Use of Psychoactive Drugs in Colombia, 1996*. CEIS (Centro de Estudios e Informacion en Salud). Santa Fe de Bogota, April 1997.
- Paglia A, Room R (1998) *Preventing substance use problems among youth: a literature review and recommendations*. Toronto, Addiction Research Foundation.
- Palomaki H, Kaste M (1993) Regular light-to-moderate intake of alcohol and the risk of ischemic stroke: is there a beneficial effect? *Stroke*, 23:1828-1832.
- PAHO (1990) [Pan American Health Organization] Special report. Epidemiological report on the use and abuse of psychoactive substances in 16 countries of Latin America and the Caribbean. *Bulletin of PAHO*, 24(1) 97-139.
- Pálsson H (1995) Reply to a questionnaire on the alcohol situation in Iceland from the World Health Organization Regional Office for Europe, Copenhagen, September 1994 with an update in 1995.

- Parker R, Rebhun L (1995) *Alcohol and homicide: a deadly combination of two American traditions*. Albany, NY, State University of New York Press.
- Parry C (1997) Memorandum to World Health Organization, Geneva, 21 November 1997.
- Parry C, Bennetts AL (1998) *Alcohol policy and public health in South Africa*. Cape Town, Oxford University Press.
- Partanen J (1993) Failures in alcohol policy: lessons from Russia, Kenya, Truk and history. *Addiction*, 88:129S-134S.
- Pihl R (1983) *Alcohol and aggression: a psychological perspective*. In Gottheil E, Druley K, Skoloda T, Waxman H. eds. *Alcohol, drug abuse and aggression* (pp. 292-313). Springfield, IL, Charles C Thomas, 1983.
- Pinn G, Bovet P (1991) Alcohol-related cardiomyopathy in the Seychelles. *Medical journal of Australia*, 155:529-532.
- Poikolainen K (1995) Alcohol and mortality: a review. *Journal of clinical epidemiology*, 488:445-65.
- Porter L, Argandóna M, Curran W (in press) Drug and alcohol dependence policies, legislation and programmes for treatment and rehabilitation. (in press) World Health Organization, Geneva.
- Pride Belize Survey Project Team (1993) *Survey of Drug Prevalence and Attitudes in Belize City*. August 1993, Belize, Central America.
- Produktschap voor Gedistilleerde Dranken (1997) *World Drink Trends 1996*. Henley-on-Thames, NTC Publications Ltd.
- Rijken T, et al. (1998) Alcohol consumption in the rural population of Misungwi Subdistrict in Mwanza Region, Tanzania. *Journal of studies on alcohol*, 59:146-151.
- Rimm EB, et al (1991) Prospective study of alcohol consumption and risk of coronary disease in men. *Lancet*, 338:464-8.
- Rimm EB, et al (1995) Prospective study of cigarette smoking, alcohol use, and the risk of diabetes in men. *British medical journal*, 310:555-9.
- Robledo de Dios T (1996) Alcohol Service, Ministry of Health (Spain), response to inquiry from World Health Organization, Geneva.
- Roche Silva L (1990) *Alcohol related research at the Institute for Sociological Research*. Pretoria. Quoted in Louw W, Social consequences of alcohol abuse in South Africa: challenges for a post-apartheid South Africa. Bellville, Cape, South Africa. University of the Western Cape, May 1990.
- Rodgers H, et al. (1993) Alcohol and stroke: a case-control study of drinking habits past and present. *Stroke*, 24:1473-1477.
- Room R, et al. (in press) *Alcohol in a changing world: drinking patterns and problems in developing societies*. Cambridge, UK. Cambridge University Press.
- Rootman, Moser (1984) *Community response to alcohol-related problems: a World Health Organization monograph*. Washington DC: US Government Printing Office. Cited in: Moser J. Memorandum to World Health Organization, Geneva, February 1996.

- Ross HL (1982) *Deterring the drinking driver: Legal policy and social control*. Lexington, MA, Lexington Books.
- Rossow I (1993) Suicide, alcohol and divorce: aspects of gender and family integration. *Addiction*, 88:1659-1665.
- Rossow I, Amundsen A (1995) Alcohol abuse and suicide: a 40-year prospective study of Norwegian conscripts. *Addiction*, 90:685-691.
- Roy A (1993) Risk factors for suicide among adult alcoholics. *Alcohol health and research world*, 17:133-136.
- Saffer H (1997) Alcohol advertising and motor vehicle fatalities. *Review of Economics and Statistics*. August 1997:431-442.
- Salonen JT, Puska P, Nissinen A (1983) Intake of spirits and beer and risk of myocardial infarction and death: a longitudinal study in Eastern Finland. *Journal of chronic diseases*, 36:533-43.
- Saxena S (1997) Memorandum to World Health Organization, Geneva, 14 January 1997.
- Schultz J, et al. (1991) Quantifying the disease impact of alcohol with ARDI software. *Public health reports* 106, 443-450.
- Scribner R, MacKinnon D, Dwyer J (1995) The risk of assaultive violence and alcohol availability in Los Angeles County. *American journal of public health*, 85:335-340.
- Secretaría de Salud (1995) Mexico, Encuesta nacional de adicciones, 1993. *Salud pública México* 1995, 37: 83-87.
- Shaper AG, Wannamethee G, Walker M. (1988) Alcohol and mortality in British men: explaining the U-shaped curve. *Lancet*, 2:1267-1273.
- Shrestha NM (1992) Alcohol and drug abuse in Nepal. *British journal of addiction*, 87:1241-48.
- Sieroslawski J, Moskalewicz J (1994) *Alcohol consumption in Poland in 1993*. Paper presented at the twentieth Alcohol Epidemiology Symposium of the Kettil Bruun Society, Switzerland, June 1994.
- Simpura J, Paakkanen P, Mustonen H (1995) New beverages, new drinking contexts? Signs of modernization in Finnish drinking habits from 1984 to 1992 compared with trends in the European Community. *Addiction*, 90:673-683.
- Singh G (1984) *Alcoholism in India*. In: De Sousa A, and De Sousa DA, *Psychiatry in India*. Bombay, Medical Publishers.
- Singh M, Simsek H (1990) Ethanol and the pancreas: current status. *Gastroenterology*. 98:1051-1062.
- Single E, et al. (1998) The economic costs of alcohol, tobacco and illicit drugs in Canada in 1992. *Addiction* 93, 983-998.
- Sistema Nacional de Informacion Sobre Drogas, Chile (1996) *Estudio Nacional de Consumo de Drogas: Informe Final 1996*. CONACE, Ministerio del Interior. Santiago, Chile, Mayo de 1996.

- Skog OJ (1980) Liver cirrhosis epidemiology: some methodological problems. *British journal of addiction*, 75:227-243.
- Skog OJ (1984) The risk function for liver cirrhosis from lifetime alcohol consumption. *Journal of studies on alcohol*, 45:199-208.
- Skog OJ (1986) *Trends in alcohol consumption and deaths from diseases*. SIFA-mimeograph no. 2/86.
- Skog OJ (1993) Alcohol and suicide in Denmark 1911-24 - experiences from a 'natural experiment'. *Addiction*, 88: 1189-1193.
- Skog OJ, Elekes Z (1993) Alcohol and the 1950-1990 Hungarian suicide trend: is there a causal connection? *Acta sociologica*, 36:33-46.
- Smith-Warner SA, et al. (1998) Alcohol and breast cancer in women A pooled analysis of cohort studies. *JAMA – Journal of the American medical association*, 279(7):535-540.
- Stampfer MJ, et al. (1988) A prospective study of moderate alcohol consumption and the risk of coronary disease and stroke in women. *New England journal of medicine*, 319:267-73.
- Statistical Office of Estonia (1996) Statistical Yearbook of Estonia 1996.
- Sundaram KR, et al. (1984) Alcohol abuse in a rural community in India, part 1: epidemiological study. *Drug and alcohol dependence*, 14:27-36.
- Suzuki K, et al. (1991) Problem drinkers among high school students in Japan. *Japanese journal of alcohol and drug dependence*, 26(3):142-52.
- Terroba G, Saltijeral MT, del Corral R (1986) El consumo de alcohol y su relacion con la conducta suicida. *Salud Publicacion Mexico*, 5(28):489-494.
- Thornton J, Heaton K, Syme S (1986) Moderate alcohol intake reduces bile cholesterol saturation and raises HDL cholesterol. *Lancet*, ii:819-21.
- Thun MJ, et al. (1997) Alcohol consumption and mortality in middle-aged and elderly US adults. *New England journal of medicine*, 337:1705-14.
- Touhami M, Bouktib M (1990) *A study on attitudes among Moroccan medical students towards the use of alcohol: preliminary results*. In: Maula J., Lindblad M., Tigerstedt C., eds. Proceedings from a meeting in Oslo, Norway, August 7-9, 1988. Helsinki, Nordic Council for Alcohol and Drug Research, 1990: 162-167.
- Ueda MM (1998) Memorandum to World Health Organization, Geneva, 27 February, 1998.
- Uhl A, Springer A (1994) *Der Konsum von Alkohol und psychoaktiven Stoffen in Österreich-Repräsentativerhebung 1993/94*. originalarbeiten, Studien, Forshchungsberichte, Bundesministerium für Gesundheit, Sport und Konsumentenschutz, 1994.
- Uhl A, Springer A (1994) *Schüler und Drogen: Wissen, Erfahrungen, Einstellungen*. Wien, Ludwig Boltzmann- Institut für Suchtforschung.
- United Kingdom [UK] Department of Health (1992) *The Health of the Nation*. July 1992. London.
- United Nations Population Division (1994) *United Nations World Populations Prospects 1994 Revision*.

United Nations Population Division (1997) United Nations World Populations Prospects 1997 Revision.

United Nations Statistical Office (1997) *Industrial commodity statistics yearbook*. New York, United Nations Statistical Office, annual.

United States (US) Department of Health and Human Services (1995) *National Survey Results on Drug Use from The Monitoring the Future Study, 1975-1994, Vol 1, 1995*. Rockville, MD.

United States (US) Department of Health and Human Services (1995) *Surveillance Report #36 - Trends in alcohol-related morbidity among short-stay community hospital discharges, United States, 1979-93*. National Institute on Alcohol Abuse and Alcoholism, December 1995. Rockville, MD.

United States (US) Department of Health and Human Services (1995) *Vital and Health Statistics: Russian Federation and United States, Selected Years 1980-93*. Series 5, International Vital and Health Statistics Reports, No. 9. Rockville, MD.

United States (US) Department of Health and Human Services (1995) *Surveillance Report #34 - Trends in alcohol-related traffic crashes 1977-1993*, National Institute on Alcohol Abuse and Alcoholism, December 1995. Rockville, MD.

United States (US) Department of Health and Human Services (1996) *National survey results on Drug Use from The Monitoring the Future Study, 1975-1995, Vol 1, Secondary school student*. Washington DC.

Urzua RF (1993) Risk factors and youth: the role of family and community. *Journal of adolescent health*, 14:619-625.

Van der Geldermalsen A, Van der Stuyft P (1993) Interpersonal violence: patterns in a Basotho community. *Journal of tropical medicine and hygiene*, 96:93-99.

Vasiliev FG (1994) Reply to a questionnaire on the alcohol situation in Moldova from the World Health Organization Regional Office for Europe, Copenhagen, Autumn 1994.

Wagenaar AC, Wolfson M (1995) Deterring sales and provision of alcohol to minors: A study of enforcement in 295 counties in four states. *Public health reports*, 1104(4):419-427.

Wannamethee SG, Shaper AG (1997) Lifelong teetotalers, ex-drinkers and drinkers: mortality and the incidence of major coronary heart disease events in middle-aged British men. *International journal of epidemiology*, 26(3):523-31.

Whitaker L, Ward H (1996) Alcohol consumption and risk of coronary heart disease: Association cannot be assumed to be causal. *British medical journal*, 313:365-366.

WHO (1995) [World Health Organization] Alcohol and Health – Implications for Public Health Policy. Report of WHO Working Group, Oslo 9-13 October 1995. World Health Organization, Geneva.

WHO (1997) [World Health Organization] *Global status report on tobacco*. Substance Abuse Department, World Health Organization, Geneva.

World Health Organization (in press) WHO Guidelines for Monitoring Alcohol Consumption and Harm. Substance Abuse Department, World Health Organization, Geneva.

World Health Organization Regional Office for Europe (1996) *Health Behaviour in School Children Study 1993/1994*. Preliminary data supplied by Dr. Bente Wold, World Health Organization

- Collaborating Centre, University of Bergen, Norway. Cited in: Moser J. Memorandum to World Health Organization, Geneva.
- World Health Organization Regional Office for Europe (1997) Smoking, Drinking and Drugs – the European Region. World Health Organization, Geneva.
- Wyllie A, Millard M, Zhang JF (1996) *Drinking in New Zealand: a national survey 1995*. Auckland, University of Auckland, Alcohol and Public Health Research Unit. Auckland.
- Wyllie A, Zhang JF, Casswell S (1998a) Positive responses to televised beer advertisements associated with drinking and problems reported by 18-29-year-olds. *Addiction*, 93:749-760.
- Wyllie A, Zhang JF, Casswell S (1998b) Responses to televised advertisement associated with drinking behaviour of 10-17-year-olds. *Addiction*, 93:361-371.
- Yamamuro B (1993) *Combatting alcohol and drugs in Japan*. Daito Bunka University, Tokyo. Condensed by the National Clearing House for Alcohol Information, Rockville, Maryland. Quoted in: Brazeau R, Burr N. Alcoholic beverage taxation and control policies, eighth edition. Ontario, Brewers Association of Canada.
- Yang B (1992) The economy and suicide: a time-series study of the USA. *American journal of economics and sociology*, 51:87-99.
- Yguel J, et al. (1990) *Consumption of alcoholic drinks in three different parts of Cameroon*. In: Maula J, et al., ed. Alcohol in developing countries, proceedings from a meeting in Oslo, Norway, 7-9 August, 1988. Oslo, Norway. Nordic Council for Alcohol and Drug Research 1990.
- Zador T (1989) *Alcohol-related risk of fatal driver injuries in relation to driver age and sex*. Washington DC, Insurance Institute for Highway Safety.
- Zweibach P (1998) Global brewers look eastward, but with a more cautious view. *Impact International*. 13(6):1-12, 1 September 1998.



Substance Abuse Department
Social Change and Mental Health
World Health Organization